EXECUTIVE COMPENSATION, SUSTAINABLE BANKING, FINANCIAL PERFORMANCE, COMPETITION AND BANK RISK-TAKING: THE MEDIATING ROLE OF CORPORATE GOVERNANCE

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Copyright statement

Abstract

This thesis seeks to investigate the associations among Executive Compensation (EC), Sustainable Banking Disclosure (SBD), Financial Performance (FP), competition and Bank Risk-Taking (BRT) in English-speaking Sub-Saharan Africa (ESSA) countries. Additionally, the thesis explores the mediating role of Corporate Governance Disclosure Index (CGI) on these associations in the ESSA banks. The thesis adopts different statistical techniques to provide an in-depth analysis. Specifically, and to address endogeneity problems, the study employs two stage least squares (2SLS), generalized method of moments (GMM) estimation and lagged structure. Using 220 banks in the ESSA region for the period from 2007 to 2018, the thesis finds that internal governance practices and competition are key determinant of BRT in the region. Next, the findings of thesis suggest that the pay-for-sustainability sensitivity (PSS) is mainly positive, and also enhances in banks with high CGI, implying that the PSS is contingent on the internal CGI of banks. Further, the evidence of the thesis show that, the sustainability-for-performance sensitivity (SPS) is generally positive, and this association is reinforced in banks with high CGI, indicating that the SPS is dependent on banks internal CG mechanisms. The results of the thesis are robust to alternative measures, estimation methods, potential endogeneity issues and sample selection problems. The findings of the thesis have important implications for banking practitioners, regulators, environmental activists and policy-makers in the ESSA region.

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List of abbreviations

BRT Bank Risk-Taking

CG Corporate governance

CGI Corporate Governance Disclosure index

CIV Community Involvement disclosures

EC Executive Compensation

EHR Ethics and Human Right disclosures

EMP Employee disclosures

ENV Environmental disclosures

EPAY Executive directors Pay

ESSA English-speaking Sub-Saharan Africa

FP Financial Performance

HAS Health and Safety disclosures

NPAY Non-executive directors Pay

PSS Pay-for-Sustainability Sensitivity

ROA Return on assets

ROE Return on equity

SBD Sustainable Banking Disclosures

SBPs Sustainable banking practices

SDGs Sustainable Development Goals

SOC Social disclosures

SPS Sustainability-for-Performance Sensitivity

TPAY Total directors Pay

PFRB Principles for Responsible Banking

Chapter 1

1.1 Introduction and research background

More than a decade after the start of the financial crisis, the banking sector continues to face key challenges with rebuilding trust and increasing their engagement with clients, customers, employees and other stakeholders (UNEP-FI, 2020). Therefore, it has been suggested that, for the banking sector to rebuild trust and effectively engage with its stakeholders, the sector needs to redefine and affirm its role and responsibilities in shaping and financing a sustainable future (UNEP-FI, 2020). Across the globe, countries are working towards greener environment, while the millennial generation is changing consumption patterns and business practices (UNEP-FI, 2020). Accordingly, in order for the banking sector to continue to play a pivotal role in the 21st century, the sector has to demonstrate how it is meeting society's changing needs and demands (UN Global compact, 2020; UNEP-FI, 2020). Arguably, one way by which the banking sector may achieve this is through sustainable banking or responsible banking initiatives (UN Global compact, 2020; UNEP-FI, 2020; Nwagwu, 2020).

Sustainable banking can be defined as the integration of environmental, social and governance (ESG) criteria into traditional banking, and the setting of ESG benefits as a key objective (Deloitte, 2017). Alternatively, sustainable banking can be considered as the acceptance and incorporation of sustainability concept into the core operations and services of banks (Deloitte, 2017). Similarly, responsible banking defines the role of the banking sector in building a sustainable future through an inclusive society that uses its natural resources sustainably (UNEP-FI, 2020). Thus, responsible banking provides the framework for a sustainable banking system and helps the banking sector to demonstrate how it can make a positive contribution to society and the planet (UNEP-FI, 2020). Evidently, both sustainable banking and responsible banking refer to unique framework for ensuring that the banking sectors' strategies, practices and operations are align with the sustainability vision set out in the United Nations Sustainable Development Goals (SDGs) and the Paris Climate Agreement (UNEP-FI, 2020). Therefore, it must be highlighted that, these two terminologies (sustainable banking and responsible banking) may be used interchangeably throughout the thesis, however, they refer to the same practice in the banking sector as both have become integral part of the 21st century banking.

The integration of sustainability into banking operations is gradually becoming an important driver in the global banking system. For instance, sustainability related issues in banking have been amplified because of the impact of banks' activities on the wider society (Fakoya &

Nakeng, 2019). In recent times, banks are under intense pressure from various stakeholders to incorporate sustainability concerns into their core operations (Kumar & Prakash, 2019). This is due to the potential crucial role that banks can play in promoting sustainable development through driving inclusive economic growth (UNEP FI, 2016). For example, it has been suggested that, the role of banks in contributing towards advancing progress in achieving sustainable business environment is priceless (Ntim, 2016). There is therefore a global concern for banks to shift from traditional banking and adopt sustainable banking practices (SBPs) into their core business strategy (Kumar & Prakash, 2019).

However, SBPs seem not to have occupied core position in the operation of banks in English-speaking Sub-Saharan Africa (ESSA) countries in the past 20 years. This was premised on the perception that, unlike manufacturing companies, banks require fewer natural resources. Banking activities were largely considered to have less detrimental impact on the environment in the region (Nosratabadi et al., 2020). Nevertheless, due to the present socially conscious business environment, sustainable banking has become a focal topic across the ESSA region. Hence, SBPs trend is fast changing how banks operate in the region. As an illustration, SBPs gained attention in ESSA after the adoption of the United Nations Sustainable Development Goals (UN SDGs) in 2015- setting 2030 as the deadline for attaining the goals. Primarily, the SDGs set criteria for sustainability through key best practices in order to compel corporations such as banks to fully integrate SBPs into their core operations.

The United Nations Conference on Trade and Development (UNCTAD) estimates the worldwide investment needs for attaining the SDGs to be around US$5 to US$7 trillion yearly (UNCTAD, 2019). Concerning developing countries, the estimate is approximately US$3.3 to 4.5 trillion annually (UNCTAD, 2019). With this huge financial investment gap needed in attaining the goals, the critical role that banks can play in directly advancing progress with the SDGs turn out to be much stronger (Nwagwu, 2020). This is particularly crucial in ESSA where banks dominate the financial sector. Banking assets account for more than 60% of the ESSA financial system (Mlachila et al., 2016). Noticeably, banks in ESSA can make an important contribution to the transition towards achieving SDGs through the integration of SBPs in their operations and services (Citigroup, 2017; David & Laurie, 2012).

The concept of SBPs incorporates sustainability principles in three key areas of banking: product definition processes, corporate strategy, and funding decisions (Nwagwu, 2020). Distinct from traditional banking where investment decisions are primarily based on risk and

return, in SBPs context, the social and environmental impact of investments decisions are given much greater consideration (Deloitte, 2017). Therefore, this paradigm shift requires banks not to only focus on maximizing shareholder value, but to also manage the impact of their operations on the broader stakeholders (Nizam et al., 2019). Therefore, the concept of SBPs seek to balance shareholder value maximization with sustainability concerns (Nwagwu, 2020).

Specifically, and in support of the SDGs, on September 22, 2019, at the United Nations General Assembly in New York, the Principles for Responsible Banking (PFRB) was formally signed under the framework of the United Nations Environment Programme Finance Initiative (UNEP-FI). The UNEP-FI is a global partnership established between the United Nations Environment Program and the financial sector (UNEP-FI, 2020). The Principles seek to provide banks with a blueprint on how banks can support with addressing the problems of climate disruption and the creation of a sustainable future (UNEP-FI, 2020). The PFRB focus on creating the future of global banking through six key sustainable banking principles. The six principles are briefly discussed below. More than a third of the global banking sector has signed the PFRB (UNEP-FI, 2020). This milestone shows the sector's pledge to sustainability and aligning its business operations and services to the provisions in the 2015 Paris Agreement and the SDGs.

The first PFRB (alignment) requires signatory banks to align their business strategies and decisions in such a manner that it will take into account individuals' needs societal needs as captured in the SDGs and the 2015 Paris Agreement (UNEP-FI, 2020). The second Principle (impact and target setting) specifies that, banks should progressively increase their positive impacts, but limit the negative impacts as well as manage the risks of their operation to people, society, and the environment (UNEP-FI, 2020). It calls for setting and publishing of targets that can lead to substantial impacts. Consistent with the SDGs, the third PFRB (clients and customers) stipulates that, banks should work with their customers and clients in a responsible manner so as to encourage SBPs and enhance economic activities, thereby creating shared prosperity for current and future generations (UNEP-FI, 2020). In line with the SDGs, the fourth Principle (stakeholders) calls for banks to be responsible by proactively consulting, engaging, and partnering with relevant stakeholders so as to attain societal goals. The fifth Principle (governance and culture) specifies that, banks should commit and implement the PFRB through effective governance and a culture of responsible banking (UNEP-FI, 2020). The sixth Principle (transparency and accountability) requires banks to regularly review the implementation and achievement of the PFRB. It also calls for signatory banks to be more

transparent about and accountable for both their positive and negative impacts as well as their contribution to the societal goals and the SDGs (UNEP-FI, 2020).

Importantly, it has been suggested that the characteristics of those entrusted with the internal governance of banks are crucial with regards to achieving a balance between satisfying shareholder value maximisation and addressing SBPs concerns (Fakoya & Nakeng, 2019). This is because, the broader spectrum of internal governance fundamentally addresses in whose best interest should banks operate (Elkington, 2006). For instance, the contemporary approach of internal governance focuses on long-term sustainability of banks (Hussain et al., 2018; Elkington, 2006). In particular, Hussain et al. (2018) suggest that internal governance mechanisms may influence the entire value chain commonly referred to as the triple bottom line (TBL) of banks. The three pillars of TBL are economic, environmental, and social performance. Based on this approach, scholars argue that internal governance mechanisms of banks should give equal weight to economic, environmental, and social dimensions (e.g., Hussain et al., 2018; Elkington, 2006). Similarly, prior research also suggests that internal governance structures such as corporate board can play a crucial role in leading banks to focus on their performance in respect of TBL initiatives (Tang et al., 2018). Thus, the board can serve as "a catalyst" for TBL performance (Walker et al., 2015).

The implication is that internal governance structures of banks may play a critical role in sustainable banking since TBL forms the three main pillars of SBPs. Notably, the TBL agenda is the responsibility of the corporate board (Elkington, 2006). For example, recent stream of research emphasizes that the tasks of the board are no longer limited to maximize shareholder value, but also to address the increasing concerns over SBPs (e.g., Shakil et al., 2020; Kouaib et al., 2020; Kanojia & Bindra, 2018). In particular, evidence from developed countries suggests that internal governance structures such as board attributes influence SBPs because of the probable impact of corporate governance (CG) on TBL (e.g., Shakil et al., 2020; Kanojia & Bindra, 2018; Goel, 2010). For example, Shakil et al. (2020) argue that internal CG structures can impact on the economic and social dimensions of TBL. They posit that, the financial performance (FP) and social performance of banks are largely driven by corporate executives and their pay. Meanwhile, the appointment of executives and the level of executive compensation (EC) packages are determined by the board. For this reason, some scholars (e.g., Ntim et al., 2019; Ntim et al., 2015; Jensen & Murphy, 1990) contend that, in poor governed banks where senior managers are given the power to determine their own pay, powerful senior managers may expropriate the resources of banks through excessive compensation. On the

contrary, others also propose that in banks with effective CG structures, EC arrangements can be structured such that it can limit senior managers from expropriating the resources of banks through excessive compensation (e.g., Kartadjumena & Rodgers, 2019; Jensen & Meckling, 1976).

Similarly, the acceptance and incorporation of SBPs into bank's operations and services are largely driven by the executives of banks (Nwagwu, 2020). The implication is that EC arrangement can be used as a motivation channel for executives to deliver on strong sustainability performance and the FP of banks (e.g., Kartadjumena & Rodgers, 2019; Dittmann et al., 2017). Accordingly, there is an ongoing research drive to find ways to motivate executives to be more sustainable responsible (e.g., Haque & Ntim, 2020; Kartadjumena & Rodgers, 2019). Prior studies in non-financial sector suggest that banks can achieve this by linking EC to SBPs (e.g., Elkhashen, 2019; Haque, 2017).

On the contrary, opponents of SBPs contend that sustainability concerns should be solely addressed by governments because it lies outside the mandate of banks (e.g., Durrani, et al., 2020; Simpson & Kohers, 2002; Preston & O'Bannon, 1997). They posit that SBPs investments including the adoption of socially responsible initiatives by banks lead to additional costs which create competitive disadvantage (e.g., Simpson & Kohers, 2002; Preston & O'Bannon, 1997; Aupperle et al., 1985; Friedman, 1970). They suggest that being sustainability active through engaging in community projects, supporting employee welfare and minimizing environmental damage can be expensive (Barnett & Salomon, 2006). Therefore, SBPs investments can be a huge source of administrative burden to banks (Barnett & Salomon, 2006), with negative impact on FP of banks.

Next, risk-taking represents significant concern for sustainability related issues in the banking system (Alguindigue, 2020). This is because excessive risk-taking threatens the stability of the banking system. Conversely, it has been suggested that internal governance structures may influence bank risk-taking (BRT) with far reaching implications on the sustainability of banks (e.g., Alguindigue, 2020).

Against this backdrop, there are calls for studies that seek to find banks' motivation for engaging in sustainable banking in the ESSA context (see Ntim et al., 2015; Ofori et al., 2014). The thesis, therefore, includes three empirical chapters investigating the associations among CG, EC, sustainable banking disclosure (SBD), FP and BRT. It also seeks to examine the possible moderating effects of CG on these associations. Notably, these three chapters are

linked together as they are all related with internal CG structures which are all within the context of the thesis. Moreover, the three empirical chapters are important within the context of CG and SBD in ESSA banks. Specifically, the three chapters seek to jointly identify key drivers of SBD in ESSA with particular focus on internal governance structures. Hence, carrying out all-inclusive and multi-dimensional investigations that capture direct and indirect links will influence SBD policy in the region. Hence, this thesis looks at SBPs from the ESSA context, keeping in view the voluntary nature of sustainability initiatives in ESSA countries.

The rest of this chapter is structured as follows. In the next section, the importance, aim and the objectives of the thesis will be discussed. The contributions the thesis will be provided in Sections 1.3. Finally, Section 1.4 provides the structure of the thesis.

1.2 Importance, aim and objectives of the thesis

Executives of banks have come under increasing scrutiny regarding their compensation in the ESSA region. Notably, the behaviour of executives of banks has been suggested to be accountable for the collapse of banks and banking crisis in the ESSA banking system (Anyanzwa, 2019). In particular, the compensation received by executives of banks in the countries continue to attract wide academic, media and policy attention (Ntim et al., 2015). This is primarily due to the crucial role that EC plays in the banking system. Accordingly, there are calls for research to find ways to limit excessive EC in the region. Crucially, one proposed approach to achieve this is to improve the internal CG structures of banks in the region (Elmagrhi et al., 2020; Ntim et al., 2015). To illustrate, countries such as South Africa, Nigeria, Ghana and Kenya have witnessed several high profile banking crises over the last two decades. The collapse of the banks in these countries were occasioned by poor internal governance structures, including excessive EC (e.g., Anyanzwa, 2019; Olaniyi, 2019; Bank of Ghana, 2018, Ntim et al., 2015).

It is also worthy to highlight that, a common issue in this stream of debate on EC in the region is whether EC has any implications for shareholder value maximization and long term sustainability of banks (e.g., Nwagwu, 2020; Anyanzwa, 2019; Ntim et al., 2015). In view of this, scholars in the region call for the design of EC schemes to serve as a powerful mechanism which can align the behaviour of bank executives with a wider stakeholder interests (e.g., Haque & Ntim, 2020; Smit & Van Zyl, 2016; Ntim et al., 2015), and possibly increase sustainable banking and the survival of banks in the region (Haque & Ntim, 2020). They contend that sustainable banking will not exist without sustainable responsible executives (e.g.,

Nwagwu, 2020; Anyanzwa, 2019). For instance, in recent times, policy makers in the region are encouraging banks to tie more and more executive compensation to sustainable banking targets (e.g., Nigeria CG Code, 2018). Moreover, theoretical evidence suggests that EC can serve as an effective tool that can be employed to motivate senior managers to achieve specific goals, including sustainable banking targets and FP (e.g., Edmans & Gabaix, 2009; Bebchuk et al., 2002; Jensen & Murphy, 1990).

Due to the crucial role and the varied reasons underlying EC in the banking system, policy makers and Central Banks in particular in ESSA have attempted to explore its determinants (e.g., Olaniyi, 2019; Olalekan & Bodunde, 2015). In particular, the ESSA region has undertaken several initiatives to reform EC in ESSA banks (Ntim et al., 2015). Briefly, the combined executive reforms in the region suggest that, banks should commit to full disclosure of EC, offering particulars of fees, salaries, bonuses, pension contributions, share options and any other long-term incentive plans in their annual reports (Ntim et al., 2015). In addition, the expectation of the EC reforms is that quality internal governance structures might influence the level of EC and sustainable banking in the region.

However, in spite of the significance of quality internal governance framework and the various Corporate Governance Reforms (CGRs) that have been undertaken in ESSA (e.g., Ghana, 2018; Nigeria, 2018; South Africa, 2016), prior studies in the region have concentrated solely on in what way or whether FP can influence EC (e.g., Ntim et al., 2019; De Wet, 2012; Shaw, 2012). Arguably, FP is not the only probable determinant of EC (Elmagrhi et al., 2020). Further, these studies focused on only non-financial firms by excluding banks in the region. The results of the above investigations have concentrated on the non-financial firms and thus offering little or no insight on the effect of CG on EC in the banking system in the region. In addition, the broader CGRs in the banking sector in ESSA countries incorporate the expectation that EC may be strongly associated with sustainable banking. Meanwhile, existing banking studies in ESSA context have not yet explored the direct links between EC and sustainable banking, as well as the possible moderating effect of CG on this link. In addition, and distinct from other sectors, the ESSA banking system has unique features (e.g., concentrated ownership), which can strengthen the interrelationship among CGI, SBD and FP. Again, most prior studies in this field are based on US and UK banks. Therefore, the thesis seeks to provide empirical evidence on these associations based on ESSA banking context.

Further, from a conceptual view, CG is crucial in decision-making in the banking system and hence, CG can be expected to influence corporate outcomes such as sustainable banking (Nwagwu, 2020). Thus, based on the key role of CG in the regions' banking system, CGRs implemented in the region over the past decade incorporate the expectation that effective governance structures can influence SBD and FP of banks. Noticeably, this assumption is at the core of several studies that have examined the effect of varied CG structures on SBD and FP of banks in the region (e.g., Agbim, 2018; Ofoegbu et al., 2018; Barako & Brown, 2008). However, although CG is a complex 'notion' to operationalize, previous researchers have used single CG variables, such as independent directors, board size and female directors (e.g., Agbim, 2018; Ofoegbu et al., 2018; Barako & Brown, 2008), for the complex CG 'concept' in the banking system in the region.

Notwithstanding the general consensus of their importance, the findings of these prior banking CG research (e.g., Agbim, 2018; Ofoegbu et al., 2018; Barako & Brown, 2008) in ESSA are mixed in terms of the nature of the variables investigated and findings. This raises crucial questions concerning these individual CG variables that have been used in these studies. For example, it is possible that these individual CG variables are not 'valid' measures (individual CG mechanisms) for the complex 'notion' (CG) that these researchers attempt to estimate ('proxy validity') (Liang et al., 2020; Elmagrhi et al., 2020; Ahmed, 2017; Black et al., 2016). Accordingly, a limited, nonetheless steadily growing number of studies have lately initiated broad methods in developing superior and consistent CG indices (e.g., Elmagrhi et al., 2020; Ntim & Soobaroyen, 2013). For instance, Elmagrhi et al. (2020) use content analysis to develop a more reliable CG index containing 120 CG provisions for UK firms. Crucially, they observe that the index is more reliable and better specified than the single CG variables. This thesis therefore responds to recent calls/debates within the CG literature for a broader CG 'concept' in the banking system (e.g., Liang et al., 2020; Tarchouna et al., 2017; Ahmed, 2017; Isukul & Chizea, 2017). Consequently, the thesis employs a broad bank level CG disclosure approach to develop an alternative internal governance proxy for ESSA banks.

In addition, the CGRs pursued in the ESSA region seek to address excessive BRT behaviour which is crucial with regards to sustainable development of the banking system. Notably, the extensive CGRs place great importance on reforming internal governance in order to protect the interest of all stakeholders. In particular, the CGRs aimed at improving the supervisory role of the board as a way of curbing excessive BRT. Therefore, the CGRs consider the board of directors as an essential internal governance entity that can alleviate the agency problem

between shareholders and senior managers. This implies that the board can play a vital role in influencing BRT behaviour. Specifically, and to improve the oversight function of the board, the CGRs encourage the appointment of majority independent directors with financial expertise to the board. In order to maintain effective control over the bank and monitor BRT, the CGRs propose regular board meetings. Also, the CGRs focus on bank ownership as key governance mechanism that can influence BRT in the region. Accordingly, the thesis examines whether board attributes, ownership structures and competition have effect on BRT, an area that is yet to receive research attention in the ESSA banking context.

In spite of the extensive CGRs in the region, by contrast ESSA banks face unique governance issues in comparison with banks in developed countries (Ntim et al., 2019). Typically, the banking system is characterized by concentrated ownership (La Porta et al., 1999), weak investor protection (Ntim, 2009; La Porta et al., 2000) and ineffective external governance mechanisms (Ntim et al., 2019). Notably, prior researchers observe that EC, SBD and BRT behavior of banks differ considerably across banking sectors because of variations in legal, institutional, supervisory and CG practices (e.g., Elmagrhi et al., 2020; Ntim et al., 2019; Apergis, 2019). However, past research in this area have focused on developed countries such as in the UK and US. Arguably, these developed countries present relatively similar institutional contexts (Ntim et al., 2019; Zheng, 2010).

Thus, the extant literature on this topic in ESSA is currently limited because prior research (e.g., Ntim & Soobaroyen, 2013; Kyereboah-Coleman, 2007) in the region excluded banks from their final sample. Meanwhile, countries in ESSA have different institutional settings, with particular regard to CGRs, EC incentives, SBD, and BRT. Hence, the moderating effect of CG on these relationships can be expected to differ from that identified in developed countries. As such, investigating these interrelationships and interdependence in single study particularly in ESSA banking context, where empirical evidence is scarce, arguably contributes to a deeper understanding of these links. Importantly, in an increasingly globalized world, tailoring the empirical evidence being disseminated to fit into the context of ESSA where these banks operate is crucial and may be effective in advancing progress towards achieving the SDGs (Nwagwu, 2020; Abor et al., 2019).

To fill these gaps, this thesis seeks to go deeper, focusing on the ESSA banking system and analyzing the interrelationships among CGI, EC, SBD, FP and BRT. The aim of the thesis is to investigate the associations among CGI, EC, SBD, FP, competition and BRT in ESSA banks,

and ascertains whether CGI can moderate these relationships. The thesis, therefore, has nine general integrated objectives that will be contained in chapters 5, 6 and 7. First, it seeks to investigate whether CGI can determine the level of EC in ESSA banks. Second, it examines the effect of EC on SBD in ESSA banks. Third, it explores whether CGI can moderate the pay-for-sustainability sensitivity (PSS). Fourth, it assesses the impact of CGI on SBD in ESSA banks. Fifth, it investigates the effect of SBD on FP of banks in the region. Sixth, the thesis explores the extent to which CGI can moderate the link between SBD and FP in ESSA banks (sustainability-for-performance sensitivity). Seventh, the thesis investigates the effect of board characteristics on BRT in the ESSA region. Eighth, it assesses the effect of different types of bank ownership on BRT in ESSA region. Finally, the thesis examines the effect of competition on BRT in ESSA region.

1.3 Contributions of the thesis

Given the importance of internal governance structures in the banking system, the contribution of this thesis is to investigate the under research context of corporate governance in ESSA banks. In doing so, the thesis first distinctively investigates the effect of internal governance disclosure index on the pay-for-sustainability sensitivity (PSS) in ESSA banking system. This is distinct from prior studies in the regions' banking system that focused on single corporate governance variables such as the size of the board, diversity and independent directors (e.g., Agbim, 2018; Ofoegbu et al., 2018; Barako & Brown, 2008), or that explored whether financial performance can act as determinant of EC in the region (e.g., Ntim et al., 2019; De Wet, 2012; Shaw, 2012). More importantly, the study contributes to the banking literature by using a comprehensive CGI containing 100 key features of CG provisions in the Combined CG Code in the ESSA countries. In particular, the thesis is among the first to examine the effect of a broad CGI on individual components of EC (i.e., executive directors pay, non-executive directors pay and total executive directors pay) in ESSA banking system. Banking studies that provide evidence of the relationship between CGI and EC based on individual components of EC is uncommon, particularly in the ESSA region.

With insights from optimal contrasting theory and managerial power hypothesis (e.g., Edmans & Gabaix, 2009; Bebchuk et al., 2002; Jensen & Murphy, 1990; Shleifer & Vishny, 1997), the evidence of the thesis suggests that CGI plays a crucial role in the level and nature of the ESSA banks' EC and SBD. The thesis provides evidence that show that CGI is negatively associated with executive directors pay, non-executive directors pay and total pay for all directors in the ESSA banks. Further, the findings of thesis show that, the negative impact of

CGI on the individual components of EC is enhanced in better-governed banks (banks with high CGI score), but weak in poorly-governed banks (banks with low CGI score).

Next, the study contributes to sustainable banking research by shedding light on the level to which EC can influence sustainable banking in the ESSA countries. It focuses on post EC and sustainable banking reforms in the region which provide a unique opportunity to examine the association between EC and SBD in an emerging economy. Precisely, the thesis contributes to sustainable banking literature by providing new evidence on the association between individual components of EC (i.e., executive directors pay, non-executive directors pay and total executive directors pay) and SBD from the ESSA banking context. Specifically, it employs a total of 135 disclosures covering six main sustainable banking themes. Banking studies in this area from ESSA region are sparse, although a few studies have explored the association between CEO pay and financial performance of banks (e.g., Gyapong et al., 2020; Olalekan & Bodunde, 2015; Aduda, 2011), without examining the impact of EC on SBD. In a related literature, Kartadjumena and Rodgers (2019) investigate whether EC can incentivise bank managers to pursue SBD as assessed by Global Reporting Initiative disclosure indicators in in a sample of 39 Indonesian banks from 2007 to 2014.

Consistent with the expectations of both EC and sustainable banking reforms in the region, the findings of the thesis reveal that, linking executive directors pay with SBD initiatives can enhance SBD in the region. The thesis also distinctively drills deeper to offer insights on the impact of three key individual EC measures (executive directors pay, non-executive directors pay and total pay for all directors) on six major individual dimensions of SBD in the ESSA region. The six dimensions of SBD are environmental, social, health and safety, ethics and human rights, community involvement and employee disclosures.

More importantly, this study departs from prior evidence (e.g., Siueia et al., 2019; Ofori et al., 2014), and contributes to sustainable banking literature by examining whether CGI moderates the pay-for-sustainability sensitivity in the ESSA region. Crucially, studies on the probably moderating effect of internal corporate governance mechanisms of banks on the pay-for-sustainability remain uncommon globally. This delivers a fertile ground to contribute to the extant international banking literature in the area. Accordingly, this is the first study from the ESSA banking sector to investigate the unique moderating effect of CGI on the pay-for-sustainability sensitivity as prior banking studies in the region have not yet investigated this key interdependence. Considering that executives' incentives and CGI can act as complements

and/or substitutes (Nguyen & Soobaroyen, 2020; Shahab et al., 2020; Ntim et al., 2019), the thesis distinctively contributes to the increasing sustainable banking studies by exploring whether CGI can influence the EC-SBD nexus.

Similarly, the thesis provides insight of the impact of CGI on the PSS based on three individual components of EC (executive directors pay, non-executive directors pay and total pay for all directors). The thesis therefore attempts to make a methodological contribution by seeking to address the probable endogeneity issues that might arise from the probable concurrent use of monitoring (CGI) and incentives (EC) mechanisms in the regions' banking system. The insight from the thesis shows that, CGI positively moderates the PSS in the regions' banking system, and this positive moderation effect is reinforced in banks with high CGI score. The thesis employs traditional OLS regressions in addition to lagged structure and two stage least squares (2SLS) methods in assessing the robustness of these contributions.

Second, this thesis contributes to banking literature by examining the impact of CGI on the sustainability-for-performance sensitivity (SPS) in ESSA banks. In particular, the thesis contributes to literature by using a CG disclosure index containing 100 key components and 135 SBD covering all the six integrated sustainability pillars from the Combined Code in the region. In conducting the CGI and SBD analysis, this research constructed disclosures reflecting CG and SBD-related expectations as well as the provisions of the Combined Code in the ESSA countries. This is different from prior evidence in the region. Previous studies in the region focused on either single CG variables (e.g., Barako & Brown, 2008), or focused on few SBD (e.g., Boachie, 2020). Moreover, other evidence is also based on a single country analysis (e.g., Siueia et al., 2019; Ofori et al., 2014).

Precisely, the thesis offers new insight by investigating how CGI influences SBD, and distinctively ascertain whether CGI moderates the sustainability-for-performance sensitivity in the region. In particular, this thesis is among the first to capture the direct relationship between broad bank level CGI and SBD in the ESSA region. Unlike past studies that used individual CG variables (e.g., Barako & Brown, 2008), or single country analysis (e.g., Siueia et al., 2019), the thesis examined the influence of CGI on the aggregate SBD, as well as the impact on six key dimensions of SBD (environmental, social, ethics and human rights, health and safety, community involvement and employee disclosures) in the ESSA context. The findings of the thesis reveal that banks with high CGI scores are associated with an increased engagement in SBD initiatives in the region. In addition, the evidence reveals that banks that

have better-governance structures engage in more SBD than their poorly-governed counterparts.

Furthermore, the thesis contributes to banking literature with particular focus on the direct impact of SBD on the FP of banks. Different from past studies (Boachie, 2020; Siueia et al., 2019; Ofori et al., 2014), the thesis provides evidence on how SBD and six individual dimensions of SBD are associated with two key measures of FP (ROA and ROE) in the ESSA banking system. Specifically, insights from the study shows that, engagement in SBD activities can potentially increase the FP of banks.

In addition, given that CGI and SBD structures may work either as complements and/or substitutes, the study distinctively seeks to contribute to the extant banking literature by exploring whether CGI can moderate the sustainability for-performance sensitivity (SPS). This inference is grounded on evolving theoretical literature and the observation of prior research that suggest that whereas the stock market prices both CG and SBD, CG disclosures may be valued higher in comparison to SBD (e.g., Ntim, 2016; Ntim & Soobaroyen, 2013; Jo & Harjoto, 2012, 2011). The thesis documents first time evidence on the moderating effect of CGI on the SPS in ESSA banking context. With this, the thesis attempts to bring together the different strands of the banking literature concerning CGI, SBD and FP in a combined empirical framework in the region.

Third, the thesis also contributes to the existing banking CG literature by offering new observations on the determinant of bank risk-taking in ESSA. Distinct from prior studies (e.g., Bokpin, 2016; Brick & Chidambaran et al., 2010), the thesis provides new insight following CG and financial sector reforms that have focused primarily on reforming governance in order to limit BRT. In particular, it contributes to banking research by exploring whether banks' internal CG variables can influence risk-taking in ESSA region. This is distinct from prior evidence (e.g., Ozili, 2018; Bokpin, 2016), as the thesis offers insight on the impact of internal governance structures which have not been explored in the ESSA banking system. Accordingly, the thesis examines the impact of some new attributes of board of directors on risk-taking in ESSA banks. More specifically, the thesis uses independent directors who are financial experts and the number of board meetings as key determinants in the study. Drawing from the theoretical insights of agency, stakeholder and resource dependence theories (Pearce & Zahra, 1992; Jensen & Meckling, 1976; Rhenman & Stymne, 1965) framework, the evidence

shows that these attributes of the board play a vital role in the determination of ESSA banks' risk-taking behaviour.

Next, the thesis is the first major study from the ESSA banking system to examine the unique relationship between distinct ownership attributes and risk-taking. Previous banking studies (e.g., Ozili, 2018; Bokpin, 2016) in the region have not investigated these relationships in a single study across the ESSA banking system. Overall, the findings reveal that all the three key attributes of bank ownership (institutional, foreign and government) are significantly (either negatively or positively) associated with risk-taking in the region. This suggests that, ownership attributes can partly explain the risk-taking behaviour of banks in the ESSA region.

Finally, the thesis contributes to the existing banking literature by investigating whether competition influences the risk-taking behaviour of banks in the region. The study focuses on post FSR in ESSA which provides a unique opportunity to test the link between intense competition and BRT. Prior evidence in the region (e.g., Akande et al., 2018) focused on a single measure of bank risk-taking. For example, Akande et al. (2018) evidence is based on only off-balance sheet risk. This thesis extends the work of Akande et al. (2018) by examining this association in a new sample and, with new and additional measures of competition and BRT. The thesis employs both Lerner and Panzar-Rose H-statistics (PRH) as measure of bank competition. Studies in ESSA have mainly applied Lerner index as measure of competition. However, the PRH method has been applied extensively as competition proxy in most banking studies (Leon, 2015). Notwithstanding its strength, PRH method has seen limited application in ESSA studies (Fosu, 2013). Further, the study employs four different and common risk faced by the banks in the region. Distinct from prior studies (e.g., Akande et al., 2018), and by focusing on various risks, the research provides the nature of the relationship between competition and specific risks of banks in the ESSA region. Based on insights from competition-fragility "view" perspective, the thesis reports that competition positively influences risk-taking behaviour in the ESSA countries.

With regards to contribution to methodology, the thesis makes a comparison of findings based on estimating direct model and indirect complex relationships (moderating effect) concerning the associations among CGI, EC, SBD and FP in the ESSA banking system. Specifically, the thesis makes a methodological contribution by attempting to address the potential endogeneity issues that may arise from the possible simultaneous use of CGI and EC and, CGI and SBD mechanisms in the ESSA banks. Prior studies have mainly examined the

direct relationship between individual CG variables and EC, whilst others focused on the association between individual CG and SBD (e.g., Boachie, 2020; Siueia et al., 2019; Ofori et al., 2014 Barako & Brown, 2008), without investigating the potential indirect or moderating effect on these associations. Accordingly, the thesis addresses these methodological gaps in literature in a combined empirical framework. Generally, the thesis shows that methodological choice can potentially impact on research findings with crucial implications for future studies. Finally, the issues that the potential presence of endogeneity may cause in these interrelationships have been addressed in a comprehensive manner. These include estimating: a lagged structure; a two-stage least squares; and a dynamic panel generalized method of moments. Arguably, these robust statistical investigations have improved the reliability of the findings. It is noteworthy to state that, these contributions are linked with chapters 5, 6 and 7 of the thesis.

1.4 Structure of the thesis

The remainder of this thesis is structured as follows. In chapter 2, the thesis discusses the background of the ESSA countries including corporate governance reforms and sustainable banking reforms. The chapter also provides overview of financial and banking sector reforms in the ESSA countries. Then, chapter 3 the thesis provides literature review to include theoretical framework and empirical evidence. Additionally, the chapter highlights the gaps in literature and suggests how the gaps in literature are addressed by the thesis. Next, chapter 4 presents the methodology and data. It also provides the descriptive statistics and correlation diagnostics. This is followed by the empirical results of the association among CGI, EC and SBD in chapter 5. In chapter 6, the empirical results CGI, SBD and FP investigation is provided. Chapter 7 also presents the empirical results of CG, competition and BRT analysis. Finally, chapter 8 provides the conclusion and future research which includes conclusion, implications, limitations and future research.

Chapter 2

2 Background of ESSA countries and corporate governance reform

This chapter focuses on the ESSA countries in terms of three key reforms undertaken in the region. They reforms include corporate governance reforms, sustainable banking reforms, and financial sector and banking reforms in the ESSA countries. Specifically, Section 2.1 provides an overview of the internal CG framework and the CG reforms undertaken in the ESSA region with particular focus on implications for EC, SBD and BRT. In section 2.2, the thesis discusses sustainable banking framework in the ESSA countries and its implication on FP. Finally, Section 2.3 provides a summary of the financial and banking reforms undertaken in the ESSA countries. Additionally, the section offers the implications of these reforms on competition and BRT in the region.

2.1 The ESSA corporate governance framework and reforms

Since 1994, countries in the ESSA region have been pursuing internal governance reforms concerning how banks are governed (Ntim et al., 2015). It must be pointed out that, the reforms were implemented following failures of banks in the region, such as Nedbank companies in South Africa (Ntim, 2009). Some of the countries have issued their own CG codes. Others are yet to issue their codes and have adopted that of neighbouring countries (see Table 2.1).

Table 2.1: Corporate governance codes in the ESSA region

Year of first issue of code	1994	2002	2003	2010
Country	South Africa (2010** and 2016**) Botswana* Zimbabwe* Mauritius* Zambia*	Kenya (2014**) Uganda* Tanzania*	Nigeria (2011** and 2018**)	Ghana (2012**)

***** are countries that are yet to issue any CG but adopt the CG code of other countries, ** denote year of revision of the code. Source: Compiled from the CG codes of Ghana (2012); Nigeria (2018), Kenya (2002 and 2014) and South Africa (1994-I, 2002-II and 2010-III and 2016-IV, King Reports).

One crucial expectation of CG reforms in the ESSA region is the expectation that effective internal governance mechanisms might limit excessive executive compensation packages in the region. Also, the Combined CG code considers corporate board as an indispensable internal governance body that can alleviate the conflict of interest between shareholders and senior

managers. This implies that the board can play a vital role in influencing BRT behaviour. Specifically, and to enhance the monitoring function of the board, the codes encourage the appointment of majority independent directors with financial expertise. To promote and maintain effective control over the bank and monitor BRT, the codes propose regular board meetings. For instance, at least six annual meetings in Ghana, three times in Nigeria and at least once every quarter in Kenya and South Africa, respectively. Notwithstanding, the CG structures in ESSA region have been characterized as less effective when compared to developed countries in key areas such as monitoring and supervising senior manager (Ntim, 2009). Based on the vital role that the board can play in the operation of banks, analyzing the link between board mechanisms and BRT is crucial issue in the region which is the focus of the study. In addition, the regional codes consider bank ownership as key governance mechanism that can impact on BRT behaviour. The ESSA region thus provides a good setting to explore the link between ownership and BRT particularly after the privatization of state-owned banks. Hence, the study examines whether various forms of ownership structure influence BRT in the region.

Again, the countries have implemented voluntary ('conform or explain') CG disclosure policy reforms (e.g., Ntim, 2016; Aguilera & Cuervo-Cazurra, 2009). To improve the quality of governance in the ESSA region, the Combined Codes focus on four main internal CG disclosures namely: (i) director and board, (ii) audit, accounting and transparency, (iii) risk management and internal control and (iv) compliance and shareholder enforcement (see Table 2.2).

Table 2.2: A Comparison of Corporate Governance Provisions of Ghana, Kenya, Nigeria and South Africa

Governance Provisions	Ghana (2018)	Kenya (2014)	Nigeria (2018)	South Africa (2016)
Board and Directors				
Board structure	Unitary board	Unitary board	Unitary board	Unitary board
Non-executive directors	Majority of board members	A balance of non-executive directors	Majority of board members	Majority of board members
Independent non-executive	Majority of non-executive directors	A balance of independent non-executive directors	Majority of non-executive directors	Majority of non-executive directors
Role duality	Split Chairperson and CEO	Split Chairperson and CEO	Split Chairperson and CEO	Split Chairperson and CEO
Chairperson independence	Independent non-executive director	Independent director	Non-executive director	Independent non-executive director

Board meetings	Regularly/at least six annual meetings	At least once every quarter	At least three times in a year	At least once every quarter
Board committees	Audit, risk, remuneration & nomination	Appointment, audit, executive, nomination & remuneration	Audit, nomination, remuneration & risk	Audit, remuneration & nomination
Director share dealings	Not covered	Not specified	Covered, but limited in scope	Prohibits insider trading
Information accessibility	Ensure equal accessibility between members	Ensure equal accessibility between members	Ensure equal accessibility between members	Ensure equal accessibility between members
Directors' development	Provided, especially for newly appointed directors	Provided, especially for newly appointed directors	Provided, especially for newly appointed directors	Provided, especially for newly appointed directors
Accounting, auditing and transparency				
Board and management compensation	Recommended to be disclosed	Recommended to be disclosed	Recommended to be disclosed	Recommended to be disclosed
Policy on risk management	Covered	Covered, but limited in scope	Covered	Covered
Audit committee	Covered	Covered	Covered	Covered
Related party transactions	Covered	Not covered	Covered	Not covered
Insider trading	Not covered	Prohibited	Allowed but should be monitored	Covered
External auditor	Recommended to be disclosed	Recommended to be disclosed	Recommended to be disclosed	Recommended to be disclosed
Risk management, internal audit and control				
Risk management committee	Covered	Not covered	Covered	Covered
Risk management committee meetings	Covered	Not covered	Not covered	Covered
Internal audit	Covered	Covered	Covered	Covered
Internal control systems	Covered, but limited in scope	Covered, but limited in scope		
Narrative on the firm as a going concern	Covered	Covered	Covered	Covered
Compliance, shareholder rights and enforcement				
Shareholder activism (proxy vote)	Covered	Covered	Covered	Covered
Shareholder right to vote	Covered	Covered	Covered	Covered
Shareholder right to have views on pay	Covered	Covered	Covered	Covered
Timely information on AGM	Covered	Covered	Covered	Covered

Sources: Compiled from the CG codes of Ghana (SEC, 2010, 2012, 2018), Nigeria (SEC, 2011, 2018), Kenya (CMA, 2014) and South Africa (2016, King Report)

2.2 The ESSA sustainable banking framework

Sustainability is concerned with ensuring long term business success, while contributing towards economic and social development, a healthy environment and a stable society (UNEP-FI, 2020). The acceptance and incorporation of sustainability concept into the core operations and services of banks is known as sustainable banking (Deloitte, 2017). Sustainable banking activities are commonly referred to as SBPs. Distinct from conventional banking where investment decisions are based on a two factors, risk and return, in SBPs, they are based on three dimensions: risk, return and impacts (Deloitte, 2017). This implies that, the probable detrimental impact of the investment decisions is of key importance in SBPs setting. Therefore, SBPs integrate profit maximization with environmental and social concerns (Nwagwu, 2020).

According to UNEP-FI (2020), countries in ESSA region will be among the hardest hit by sustainability issues such as climate change. Take for example, the region already faces daunting challenges around job creation, poverty and inequality (UNEP-FI, 2020; Muriithi & Louw, 2017). Notwithstanding the pivotal role that banks can play in sustainability, the concept of SBPs was not considered as an integral part of banking in the last 20 years in ESSA (Nwagwu, 2020). Indeed, SBPs is an emerging concept for the banking sector in ESSA countries (UNEP-FI, 2020). This was mainly due to the claim that the banking sector does not have a direct substantial environmental and social 'footprint' in comparison with manufacturing or extractive industry sectors in the region (Ganda & Ngwakwe, 2014).

However, as the global banking sector steadily shifts toward responsible banking, banks operating in ESSA are gradually coming under increased pressure to meet such best practice trends (UNEP-FI, 2020). Accordingly, countries in the region have implemented regulatory framework that makes banks and investors accountable for their environmental and social impacts. This is becoming a key source of financial incentive for banks to incorporate sustainability issues into their core operations and services. Another key driver of sustainable banking reforms in ESSA stems from pressure from various stakeholders for greater transparency and disclosure by banks, regarding their community involvement, equality, and more importantly the fear of negative publicity related with these, is prompting banks to become more committed to responsible banking (UNEP-FI, 2020).

Next, social pressures such as the need for job creation, black economic empowerment (BEE), poverty alleviation, HIV/AIDS, Ebola and COVID-19 are having negative impact on the financial viability of projects particularly in the ESSA region. Therefore, there is an

increasingly recognition within the banking sector as a matter of necessity to address these challenges. Consequently, banks are becoming aware of the need to take into account these challenges in their financial modelling phase, to evaluate not only the effect on the projects, but also the implications they have on loan repayments and associated communities (UNEP-FI, 2020). Additionally, the expansion of international standards, guidelines and CG codes are compelling banks in the region to accept that, they no longer act independently from the societies and the environment in which they operate. Accordingly, banks in the region have begun to embrace sustainable banking, thereby shifting from a single bottom line (profit maximization) to a triple bottom line (economic, environment and social) managerial approach (UNEP-FI, 2020).

In response, policy makers have implemented sustainable banking reforms over the past decade (e.g., Ghana SEC code, 2010, 2012; Nigeria SEC code, 2011, 2018; The Kings Report, 2016; Kenya CG code, 2016). It is worthy to note that, the responsible banking reforms in the ESSA countries expect executive pay to be strongly associated with SBPs. Hence, the reforms require banks to fully disclose their EC and SBD activities in their annual reports. Briefly, the combined sustainable banking reforms in ESSA region highlight six integrated responsible banking themes namely: (i) environmental disclosures (ii) social investment and service quality disclosures (iii) health and safety disclosures (iv) ethics and human right disclosures (v) community involvement disclosures and (vi) employee disclosures (see Table 2.3).

Table 2.3: A Comparison of Integrated Sustainable Banking Reporting of Ghana, Kenya, Nigeria and South Africa

Sustainability Provisions	Ghana (2018)	Kenya (2014)	Nigeria (2018)	South Africa (2016)
Environmental disclosures				
Environmental policy	Covered, but limited in scope	Covered	Covered	Covered
Policy on climate change	Not specified	Not specified	Covered, but limited in scope	Covered
Clean energy policy	Not specified	Not covered	Covered, but limited in scope	Covered
Green gas emission/global warming policy	Not covered	Covered	Covered, but limited in scope	Covered, but limited in scope
Environmental reporting	Covered, but limited in scope	Covered	Covered, but limited in scope	Covered
Recycling and raw material conservation policy	Not covered	Not specified	Not covered	Covered, but limited in scope
Environmental conservation	Covered, but limited in scope	Covered	Covered, but limited in scope	Covered, but limited in scope

Energy savings	Not covered	Covered, but limited in scope	Not covered	Covered
Environmental management systems	Covered, but limited in scope	Covered	Covered, but limited in scope	Covered
Product innovation	Not covered	Covered	Covered, but limited in scope	Covered
Social disclosures				
Social policy	Covered	Covered	Covered	Covered
Education policy	Not covered	Covered, but limited in scope	Not covered	Covered
Road construction policy	Not covered	Not covered	Covered, but limited in scope	Not covered
Sports and donations	Not covered	Not specified	Covered, but limited in scope	Not specified
Natural disaster	Not covered	Not specified	Covered	Covered
Feedback systems	Covered, but limited in scope	Covered	Covered	Covered
Health and Safety disclosures				
Health policy	Covered	Covered	Covered	Covered
Health education	Covered	Not specified	Covered, but limited in scope	Covered
Health of employees and family	Covered	Covered, but limited in scope	Comprehensively covered	Covered
Safety in the workplace	Covered, but limited in scope	Not specified	Covered	Covered
Product and customer safety	Covered	Not specified	Covered	Covered
HIV/AIDS	Not covered	Not specified	Covered, but limited in scope	Comprehensively covered
Ebola	Not covered	Not covered	Covered, but limited in scope	Not specified
Health assistance to disabled	Covered, but limited in scope	Covered	Covered	Covered
Community involvement				
Community involvement policy	Covered	Covered	Covered	Covered
Donation to NGOs	Covered	Covered	Covered	Covered
Support for community campaigns	Covered	Covered	Covered	Covered
Support for refugees	Not covered	Covered	Covered	Covered
Support for arts and culture	Not specified	Covered, but limited in scope	Not specified	Not specified
Support to local farmers	Not covered	Not covered	Covered, but limited in scope	Not covered
Ethics and human rights				
Ethics policy	Covered	Covered	Covered	Covered
Bribery and corruption	Covered, but limited in scope	Covered	Covered	Not specified
Support for political parties	Covered	Not covered	Covered, but limited in scope	Covered
Labour rights	Covered	Covered, but limited in scope	Covered	Covered
Fair business practices	Covered, but limited in scope	Not covered	Covered	Covered
Code of ethics	Covered	Covered	Covered	Covered

Gender and minority	Covered, but limited in scope	Covered	Not specified	Covered
Whistle blowing policy	Covered	Not covered	Covered	Covered
Employee disclosures				
Staff training and development	Covered	Covered	Covered	Covered
Staff compensation	Covered	Covered	Covered, but limited in scope	Not specified
Staff pension	Covered	Covered	Covered	Covered, but limited in scope
Facility for employee dependents	Covered	Covered	Covered	Not specified

Sources: Compiled from the CG codes of Ghana (SEC, 2018), Nigeria (SEC 2018), Kenya (CMA, 2014) and South Africa (2016, King Report)

Given that the banking sector is at the heart of financial sector and the society in the region, it is expected to be more sustainability accountable as stipulated in the Combined Code (Siueia et al., 2019; Chambers & Day, 2009). Although countries in the region have pursued inclusive CG reforms (combined CG and SBD reforms), it must be pointed out that, complying with the sustainable banking reforms contained in the Combined Code in the ESSA region is voluntary. In addition, the ESSA banking context is typically characterized by concentrated ownership structures (e.g., Ntim, 2016; Bokpin, 2016). In addition, activism by shareholders is noticeably weak in the countries (Ntim, 2016). Moreover, none of the corporate laws and regulatory guidelines in these countries required mandatory disclosure of sustainable banking activities in annual reports of ESSA banks. Thus, banks disclose information on SBD on voluntary basis (Ntim & Soobaroyen, 2013).

Discernably, this raises concern as to whether the voluntary compliance CG reforms implemented in ESSA may be efficient with regards to advancing good CG and enhancing SBD initiatives. Accordingly, the region constitutes an ideal banking system for the investigation. Additionally, the Combined Code stipulates that, banks can leverage on SBD as valuable asset which can enhance their reputation and FP. In this regard, the study expects that good CG in the form of improved SBD may enhance the legitimacy of banks' operation and reputation in the region. This can enhance efficiency and FP of banks through the acquisition of key resources. Hence, in line with the Combined Code, the study examines whether internal CGI can moderate the association between SBD and FP in ESSA banks.

2.3 The ESSA financial sector reforms in the region

The financial sector reforms (FSR) in ESSA has progressed from the pre-colonial native system that resembles barter trade arrangements (Gakunu, 2007). During colonial era, financial systems in the region were largely underdeveloped (Mlachila et al., 2013). The colonial leaders principally introduced money for the purpose of tax payments to the colonial governments in the region. A limited number of banks were introduced to facilitate trade mainly in the export of minerals business across the countries in the region. These banks were mainly expatriate banks. Accordingly, the few banks that were established in the countries during the colonial era solely provided for the needs of expatriate merchants.

After independence in the 1970s, most governments commenced plans to nationalize their banking sectors as a way of making credit more accessible to the local people. This led to the establishment of state banks which were wholly funded by the state. However, these state-owned banks failed to comply with the strict regulations and procedures instituted by the respective national regulators in the countries in the region. Consequently, post-independence banking systems in most of the countries remained shallow with state-owned banks as the dominant institutions (Mlachila et al., 2013). Confronted with huge developmental gap, most governments put severe pressure on their banking systems. In the absence of strict regulation, the banks fixed interest rates at extremely low level beyond the deposit rates (Elix, 2019). This practice allowed several governments to cheaply borrow from the banks. This led to the crowding of the regions' banking system (Elix, 2019), leading to systemic banking crises in most of the countries in the late 1980s in the region (Bokpin, 2016).

To revamp the banking system, post-1980s governments in the region implemented different FSR. The prime objective of the FSR was to restructure and privatize state-controlled banks in the ESSA region. The FSR were instituted by the International Monetary Fund (IMF). In addition, World Bank also put in place several programs and policies aimed at revamping the financial sector in the ESSA region at different times in the region. Notable among these polices is the Structural Adjustment Policies (SAP). Some of the notable programmes implemented by The IMF and World Bank and included Financial Sector Assessment Program (FSAP), Financial Sector Adjustment Programme (FINSAP) and Economic Recovery Programme (ERP). These programmes focused on stabilising and reforming the financial sector particularly the banking system through: (i) liberalisation of interest rate regimes; (ii) removal of credit ceilings and (iii) structuring of more desirable interest rates to essential sectors of the economy. This was done to guarantee the flow of financial services to the most productive sectors of the

economy; (iv) privatization of state-owned banks to private investors and institutions and (v) improved supervision by national regulators such as Central Banks to safeguard stability in the financial sector especially the banking system (Mlachila et al., 2013; Elix, 2014; Gakunu, 2007).

The implementation of the reforms led to other supplementary policies in the region. For instance, the reforms resulted in the easing of entry and exit restrictions in the financial sector (Nyantakyi et al., 2015). This allowed entry of several foreign banks into the ESSA region (Nyantakyi et al., 2015). Although the total financial gains of the FSR remain largely debatable among scholars, the consensus is that it has led to intense competition in the region (e.g., Motsi et al., 2018; Gulde et al., 2015; Nyantakyi et al., 2015). The implication is that, the FSR has presented key challenges to policymakers with regards to BRT in the region. Therefore, the thesis seeks to empirically examine whether the increased competition resulting from the reforms has any significant effect on BRT behaviour in the ESSA region.

Chapter 3

3 Literature Review

This chapter provides literature review of the thesis. The chapter is organized as follows. In section 3.1 the thesis provides the theoretical framework of the study. Section 3.2 provides the empirical evidence and hypotheses development. Additionally, the section highlights the gaps in literature and suggests how the gaps in literature are addressed by the thesis.

3.1 Theoretical framework

This section briefly discusses the main theoretical foundations of the study. The thesis adopts the integrative conceptual framework proposed by Mellahi et al. (2016), and as applied in recent banking studies (e.g., Gupta & Bala, 2020; Orazalin, 2019; Kartadjumena & Rodgers, 2019; Platonova et al., 2018). This framework provides a new classification of governance theories into internal and external drivers (Frynas et al., 2016). Internal governance driver's theories are concerned with the analysis of internal motivators. Specifically, the thesis relies on four internal CG theories namely managerial power hypothesis (Edmans & Gabaix, 2009; Bebchuk et al., 2002; Jensen & Murphy, 1990; Shleifer & Vishny, 1997), optimal contrasting theory (Edmans & Gabaix, 2009; Bebchuk et al., 2002; Jensen & Murphy, 1990), agency theory (Jensen & Meckling, 1976) and resource-based view (Rugman & Verbeke, 2002) as primary motivator theories of the study (Frynas et al., 2016).

Theories of external drivers of CG incorporate motivators concerned with relational, political or integrative drivers (Mellahi et al., 2016; Frynas et al., 2016). The thesis includes three external CG theories as secondary motivators or complementary theories. They are stakeholder theory (Huse, 2009; Rhenman & Stymne, 1965), resource dependence theory (Pearce & Zahra, 1992; Pfeffer & Salancik, 1978; Pfeffer, 1972), and neo-intuitional theory (Scott, 2001; North, 1991; Powell & DiMaggio, 1991; Ashforth & Gibbs, 1990).

The thesis applies the above multi-dimensional framework due to the following reasons. Together, these theories are multi-dimensional and all-inclusive that can directly and/ indirectly capture internal (Frynas et al., 2016) and external theoretical predictions simultaneously (Suchman, 1995). Further, the thesis seeks to explore complex interrelationships among CGI, EC, SBD, FP and BRT in ESSA banks, which intrinsically involve various organizations and stakeholders with diverse interests. Hence, the study contends that a multi-dimensional approach is the most appropriate theoretical framework. In addition, there has been increasing calls (e.g., Haque & Ntim, 2020; Mellahi et al., 2016; Frynas et al., 2016) for multi-dimensional

theoretical approach in CG studies to provide new insights that can lead to theoretical improvements. Hence, the thesis attempts to respond to such calls by scholars.

Firstly, and in line with Kartadjumena and Rodgers (2019), the thesis applies insight Managerial Power Hypothesis (MPH) and Optimal Contrasting Theory (OCT) to explain the pay-for-sustainability sensitivity in the ESSA banks. Banks are subjected to agency conflict: the divergence between the individuals who manage the banks (the executives who are the agents) and the owners of the banks who are the shareholders (Emerton & Jones, 2019). Typically, ownership of banks are likely to be diverse in nature, with few senior executives largely in control of the running of the banks (Emerton & Jones, 2019; Ntim et al., 2015; Berrone et al., 2008). This presents a classic agency conflict in the banking system, as there is the likelihood for opportunistic senior managers to seek their self-centered interest at the expense of shareholders (e.g., Abdullahi & Tanko, 2020; Kartadjumena & Rodgers, 2019). To resolve this agency conflict, different approaches have been proposed within the banking system. Two of such key mechanisms in the banking system that can resolve the agency conflict are effective internal governance through monitoring and incentive alignment (Jensen & Meckling, 1976). Compensation incentive schemes can motivate executives to work in the best interests of shareholders and other stakeholders (Kartadjumena & Rodgers, 2019). Hence, from theoretical perspective, an important approach for bringing into line the interests of shareholders, stakeholders and senior managers is to structure suitable executive pay packages (e.g., Abdullahi & Tanko, 2020; Pepper et al., 2013).

Noticeably, this is the dominant motivation underlying the various sustainable banking reforms in ESSA countries over the past decade (e.g., King, 2016, Ghana SEC, 2010; Nigeria SEC, 2011). Discernably, the fundamental question, as to whether such EC arrangements are also effective in enhancing SBD initiatives has comparably generated extensive theoretical debate and research interests (e.g., D'apolito et al., 2019; Kartadjumena, 2019). In particular, agency theory (AT) contends that incentive alignment through executive pay and internal governance can play crucial role in resolving agency problems in banks due to the separation of ownership from control (Ntim et al., 2019; Jensen & Meckling, 1976). Notwithstanding, while the general objective for designing EC schemes is to align the interests of shareholders and senior managers, such incentive contract might themselves lead to an increased agency conflicts in banks (e.g., Kartadjumena & Rodgers, 2019; Kartadjumena, 2019; Ntim et al., 2019; Ntim et al., 2015).

Not surprisingly, the pay-for-sustainability sensitivity banking studies are reinforced by two sharply opposing incentive alignment theories namely optimal contracting theory (OCT) (e.g., Kartadjumena, 2019; Shaw, 2012; Waweru et al., 2009), and managerial power hypothesis (MPH) (e.g., Kartadjumena, 2019). The two theories differ because, while OCT focuses on the use of monitoring and incentive alignment as powerful tools to reduce agency conflicts in banks, MPH suggest an increase in agency conflicts due to ineffective governance and incentive schemes (e.g., Kartadjumena & Rodgers, 2019; Kartadjumena, 2019).

Accordingly, prior banking studies on CG, EC and SBD have employed either OCT perspective (e.g., Shaw, 2012; Waweru et al., 2009), or MPH (e.g., Kartadjumena, 2019). However, individually these theories give one-dimensional perspective of governance and hence, a deeper understanding can be obtained by taking a multi-paradigm perspective (Cornforth, 2002). Consequently, some previous studies have used a combination of the two theories (e.g., Kartadjumena & Rodgers, 2019). In particular, the thesis adopts the PSS theoretical framework developed by Kartadjumena & Rodgers (2019) in the banking system as illustrated in Fig 3.1 below.

Managerial power hypothesis posits that in banks with poor CG mechanisms, opportunistic influential senior managers can expropriate bank resources when they have control to set their own remuneration (e.g., Kartadjumena & Rodgers, 2019; Ntim et al., 2015; Shleifer & Vishny, 1997). Thus, it can be expected that MPH framework will be more effective in a banking environment where the CG structures are weak (e.g., Kartadjumena, 2019; Shahab et al., 2020). Proponents of this view consider EC arrangements as a product of close interpersonal relationships and negotiations between powerful senior managers, such as the CEOs, and weak board of directors (e.g., Scherer, 2020; Kartadjumena, 2019; Ntim et al., 2015; Sapp, 2008). This can lead to the creation of inefficient managerial contracts (e.g., Scherer, 2020; Kartadjumena & Rodgers, 2019). The outcome of such contracts is the exacerbation of agency conflicts by increasing the disparity of interests between senior managers and stakeholders (Bebchuk &Weisbach, 2010). Because senior managers are presumed to determine their own compensation (Kartadjumena & Rodgers, 2019; Kartadjumena, 2019; Van Essen et al., 2015), managerial power hypothesis view expects EC not to be tied necessarily to SBPs; thus, expecting the pay-for-sustainability sensitivity to be relatively small or weak.

Alternatively, optimal contrasting theory views the interaction between independent board and senior managers as efficient and should not be interrupted since it improves the value of

banks by creating efficient managerial contracts (Kartadjumena & Rodgers, 2019; Ntim et al., 2015; Jensen & Murphy, 1990). Consequently, the theory proposes that agency conflict should lessen owing to proper alignment of the interest of senior managers, shareholders and other stakeholders (Jensen & Meckling, 1976). Hence, OCT perspective is more applicable when CG structures are effective (e.g., Elmagrhi et al., 2020; Kartadjumena & Rodgers, 2019; Kartadjumena, 2019).

Because the theory proposes that EC stems from arms-length negotiations between a bank with independent board and executives, it can potentially be used to optimize managerial performance (e.g., Kartadjumena & Rodgers, 2019; Conyon, 2014; Conyon & He, 2012; Edmans & Gabaix, 2009), especially in areas such as achieving SBPs (e.g., Kartadjumena & Rodgers, 2019; Kartadjumena, 2019). Within this framework, banks can achieve long-term value creation by linking EC to sustainability performance. This is mainly due to the assumption that executive directors have limited influence in determining their own pay (Elmagrhi et al., 2020). Because executive directors often do not have full control over their remuneration, the theory predicts that executive pay can influence SBD. Accordingly, OCT expects a strong positive PSS, due to the suggestion that senior bank managers have less control in determining their own compensation packages (Kartadjumena & Rodgers, 2019; Ntim et al., 2015). Therefore, this theoretical framework expects a strong PSS in the banking system in ESSA.

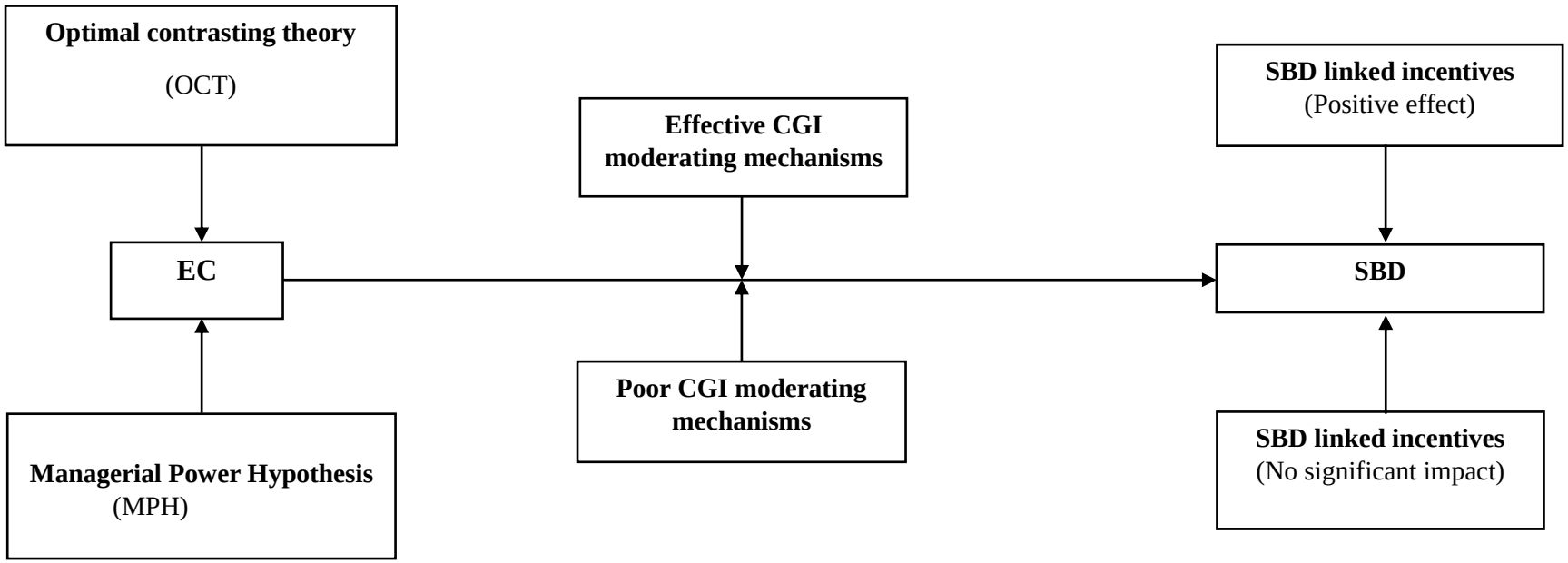
Overall, given the complex nature of the association among CGI, EC and SBD, the thesis relies on two opposing theories in developing the hypotheses, as well as in the discussion of the results in chapter 5. On one hand, MPH suggests that, in banking system where the CG structures are weak, bank executives can have greater control over their compensation packages, which leads to a weak PSS (see Fig 3.1). On the other hand, OCT suggests that in banks with good CG mechanisms, senior managers pay incentives can be structured in such a manner that it can contribute to properly align the interest of senior managers and owners of banks. In this case, EC arrangements can be expected to improve the PSS (see Fig 3.1).

Notably, and as discussed in Chapter 3 of the thesis, the CG, EC and sustainable banking reforms implemented across the ESSA countries have focused on two important areas. Consistent with MPH view, the reforms seek to encourage banks to put in place strong internal CG structures to prevent opportunistic senior managers from expropriating bank resources by possessing the power to structure their own compensation. Potentially, this can minimise

agency conflicts in banks including curbing excessive EC (Elmagrhi et al., 2020). This is particularly crucial given the weak institutional framework in the region. Prominently, the Combined Code focuses on four key CG disclosures: (i) director and board; (ii) accounting, auditing and transparency; (iii) risk management, internal audit and control; and (iv) compliance, shareholder rights and enforcement.

Further and consistent with optimal contrasting theory, the Combined sustainable banking reforms in the region recommend that a greater amount of the total executive compensation package should be linked to progress towards attaining SDGs. This is expected to align executive interests with those of broader stakeholders. Accordingly, the reforms encourage banks to consider SBPs and integrate them into their operations and services, especially with regards to compensation packages for executives. Based on the importance of the two theories in CG related studies, the study applies insight from these theories to develop the hypotheses and interpret the results in ESSA banking context. This is because these theories are multi-dimensional and all-inclusive that together can directly and/ indirectly capture internal governance theoretical predictions simultaneously (Suchman, 1995). In addition, the study seeks to explore complex interrelationships among CGI, EC and SBD, which intrinsically involve various stakeholders with diverse interests. Hence, the study contends that the above multi-dimensional approach in Fig 1 will be the most appropriate theoretical framework.

Fig 3.1: An integrative model of the impact of corporate governance mechanisms on the Pay-for-Sustainability Sensitivity Framework



Source: Adapted from Kartadjumena and Rodgers (2019).

Second, the thesis draws insight from agency, resource-based view, stakeholder, resource dependence and neo-institutional theories to investigates the sustainability-for-performance sensitivity (SPS) in the ESSA banks (Fig 3.2). In doing so, the thesis adopts the integrative conceptual framework proposed by Mellahi et al. (2016), and as applied by prior studies that investigate the SPS in the banking sector (e.g., Orazalin, 2019; Platonova et al., 2018).

Agency theory (AT) is one of the pivotal theories in the framework of governance in the banking system (Albassam, 2014). The theory addresses agency problem that arises due to the conflict of interest between owners and senior managers. The agency problem is heightened by the inability of shareholders to effectively monitor senior managers. Take for example, senior managers may employ charity approach as a way of receiving endorsement and admiration from local corporate leaders (Galaskiewicz, 1985), which may not serve in the interest of shareholders. Thus, AT set out to check misappropriation of shareholders' wealth (Ntim, 2009).

Internally and more importantly, AT concentrates on designing resourceful contracts and employing efficient monitoring systems to protect shareholders' interests (Eisenhardt, 1989). The implication is that, banks that put in place efficient internal governance mechanisms may ensure that senior managers commit to long-term sustainability of banks. For example, banks with effective CG will curb the likelihood for senior managers to engage in self-serving charitable investments, which may hurt shareholders by generating lower FP (Frynas et al., 2016). Consequently, within this framework, better-governed banks may engage in SBD more than their poorly governed counterparts (Ntim & Soobaroyen, 2013).

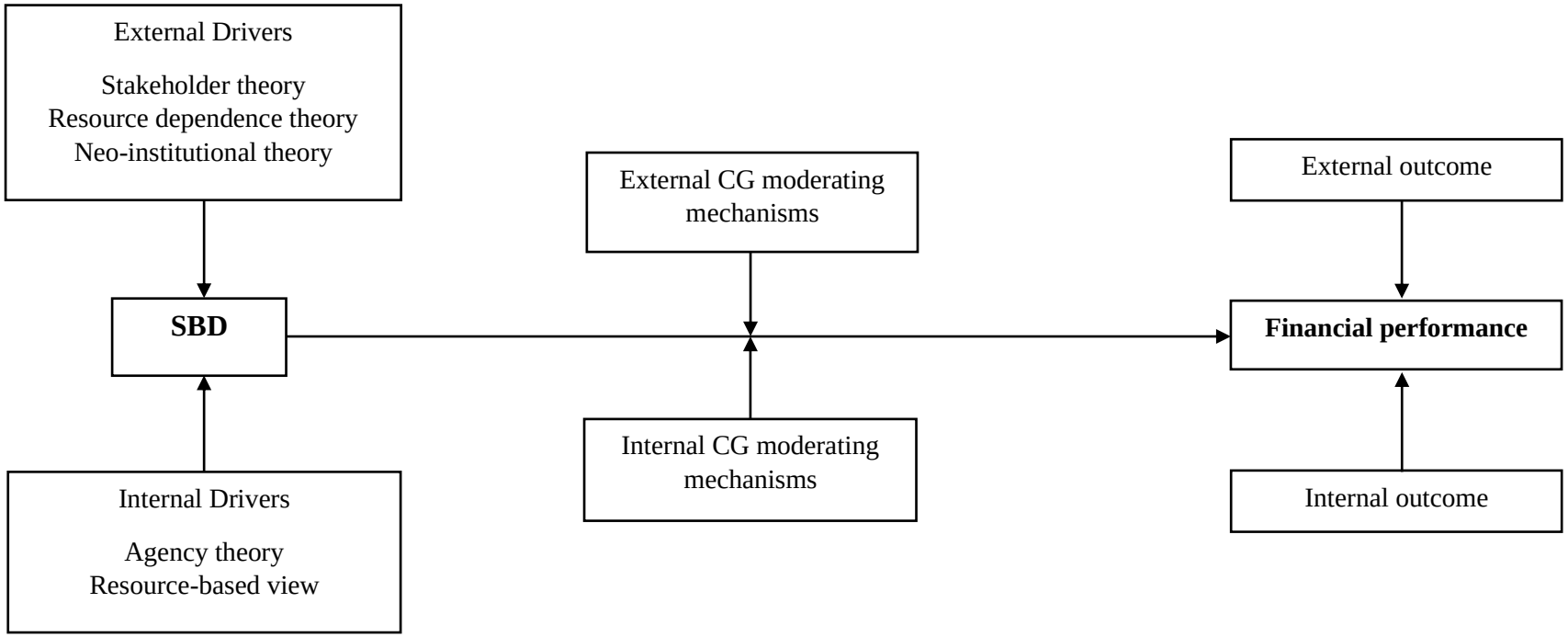
Crucially, AT depends on well-organized market features such as bank control and managerial labour to oversee or discipline managerial misbehavior (Fama, 1980). In particular, within the banking sector, the present and future wage opportunities of senior managers may be influenced by the future successes or long-term sustainability of the banks. (Fama, 1980). This means that in better-governed banks, senior managers may have key interests in the FP of banks. This can limit senior managers from expropriating shareholders wealth in the banking system. Hence, AT predicts that, the quality of governance in banks may influence its sustainable banking and financial performance.

In practice and to enhance board independence, the theory suggests the establishment of boards with minority executive members, and the roles of chairperson and MD/CEO should be held by different persons (Ntim & Soobaroyen, 2013). It also calls for the formation of board sub-committees, risk management and internal control systems to monitor managerial behaviour (Albassam, 2014; Jensen & Meckling, 1976). In brief, AT postulates that a net

decline in agency costs (monitoring) stemming from the establishment of quality CG mechanisms should help increase sustainable banking investments and improve financial performance of banks (Ntim, 2009). This is the dominant theory fundamental to the provisions of several CG codes in various regions and countries (see OECD Principles, 1999; Cadbury, 1992).

Similarly, the theory has also been the foremost stimulus driving the implementation of the Combined Code in the ESSA region. The Combined Code seek out to decrease agency conflicts between senior managers and owners of banks by enhancing transparency, accountability and the supervisory role of the board of the bank (Munisi et al., 2014). For this reason, to a greater extent the use of AT perspective becomes even more crucial internal driver of sustainable banking disclosure and financial performance in the context of the ESSA region.

Fig 3.2: An integrative model of the moderating effect of governance on Sustainability-for-Performance Sensitivity (SPS) framework



Source : Adapted from Mellahi et al. (2016).

Next, resource-based view (RBV) addresses the heterogeneity of banks regarding their strategic and resource endowments (Rugman & Verbeke, 2002). RBV focuses on the strategic ability of banks to exploit internal resources in the quest for sustainable competitive advantage (Frynas et al., 2016). Hence, the fundamental principle is that bank-specific resources may offer sustainable competitive advantage (Haque & Ntim, 2020).

Internal CG disclosure and SBD-related implications of RBV suggest that unique skills and competences linked to CG and SBD can lead to bank-specific financial benefits (McWilliams & Siegel, 2011), which can enhance FP. For instance, based on RBV perspective, SBD can be seen as important investment in abilities that may permit a bank to distinguish itself from its competitors, thereby enhancing FP (Frynas et al., 2016). Such capabilities may include reputation for sustainability management (Lourenco et al. 2014), green novelties (Chen et al., 2006), key proactivity (Torugsa et al., 2012), social and environmental capabilities (Frynas et al., 2016). Others include technological resources and abilities (Huang et al., 2015), and marketable rewards for banks (for example by improving product diversity or establishing barriers to entry for competitors) which can improve FP (Frynas et al., 2016).

Based on RBV, banks in ESSA can gain sustainable competitive advantage through investments in sustainable operations such renewable energy, reduced pollution and energy consumption. This is because, such investments can potentially reduce the operational costs of banks with regards to utility bills (e.g., electricity and water bills). This is particularly important given the high cost of electricity in the region (Suberu et al., 2013).

Similarly, by focusing on employee responsible agenda, banks can attract and retain highly skilled staff which can lead to customer satisfaction. In addition, employee responsive banks benefit in terms of staff commitment which can offer such banks competitive advantage as human capital is one of the key resources in the banking system. Given the important role that CG structures play in the choice and nature of internal SBD investments, the study relies on RBV as a theory that can complement AT in explaining the internal drivers of SBD and FP of banks in the region.

Also, stakeholder theory (SHT) focuses on the need for banks to manage the complex and conflicting relationships with their stakeholders. Based on SHT, the success of banks largely depends on the enduring relationship with stakeholders. Hence, managing these stakeholders is a key tool for value creation. The stakeholders include customers, employees, creditors, competitors, public interest groups, environment, and governmental bodies (Tamimi & Sebastianelli, 2017). Thus, identifying stakeholders can help managers of banks to respond to

their concerns inclusive of stakeholders who might not even have legitimate demand but who may affect or are being affected by the operation of the bank (Freeman, 1984).

Therefore, SHT provides a framework that links CG to SBD (Huse, 2003). From the perspective of this theory, banks disclose CG information in order to mitigate information asymmetry with shareholders and to improve stakeholder confidence (Grassa et al., 2019). For example, government, regulatory bodies and other stakeholders are considered as external "influencers" of SBD activities as banks rely on SBD as a key strategy to resolve the claims of their external stakeholders (Roberts, 1992). Hence, the theory suggests that, better-governed banks are expected to adopt SBD activities as a credible means of showing their good internal CG to their stakeholders (Beekes & Brown, 2006).

The theory asserts that, banks may engage in SBD as a form of establishing trusting, cooperative and goodwill relationships with stakeholders, which can serve as key competitive advantage (e.g., Jizi et al., 2014; Kolk & Pinkse, 2010). By way of illustration, high SBD can produce invaluable goodwill, which can safeguard the banks from unforeseen concerns and contribute to attracting new businesses (Platonova et al., 2018). This can improve the FP of the banks. Within this framework, it can be argued that SBD promotes banks' image and enhances their reputation. For instance, socially responsible banks have a tendency to be associated with greater brand loyalty (Jizi et al., 2014), customer satisfaction, whereas employee responsive banks benefit in terms of employee commitment. Additionally, SBD engagement can enhance FP of banks by reducing labour disputes and work stoppages because of disputes between the bank and employees such as strikes and lockouts (Waddock & Graves, 1997).

In sum, SHT advances that the board should protect the shareholders' interests by taking full and appropriate account of the interests of other stakeholders and the community. This is the dominant foundation emphasized in the recommendations of the all the CG codes and sustainability reforms in the ESSA countries. Based on the above discussion, the study relies heavily on SHT as external driver theory that provides the foundation of arguments in literature and the hypothesis development on the relationship among CGI, SBD and FP in the region.

Further, resource dependence theory (RDT) is the next corroborating theory that this research depends on. RDT argues that banks rely on their environment to ensure the flow of essential resources for their sustainability (Pfeffer &Salancik, 1978). Therefore, managers of banks must pay key consideration to the claims of the factors in the environment that offer these resources for their continuous existence (Frynas et al., 2016). According to Oliver (1991), these various actors may put contradictory social demands on banks. Thus, it may be difficult for a bank to satisfy all these conflicting demands. Therefore, banks should focus on social

players who are in control of these crucial resources (Pfeffer &Salancik, 1978). This may explain, for instance, why banks tend to pay considerable attention to employee related issues as a way of attracting and highly maintaining skilled employees.

Considered as the most critical resource, RDT calls for the establishment of strong independent corporate board. This will ensure that senior managers are efficiently supervised. It can also serve as a crucial connection between the banks and their external essential resources that the banks need to optimize their FP. For instance, the board of every bank serves as a pivotal connection to the bank's external actors and other key stakeholders including creditors, suppliers, customers, and competitors (Surroca et al., 2010).

Within broader framework of RDT, banks in developing economies can consider SBD in general as intangible assets that can result in a more effective utilization of resources, which in turn enhances the FP of banks (Surroca et al., 2010). Banks that engage in wide-ranging local developmental programmes (such as health and education) can attract and win businesses within their locality.

Consistent with the Combined Code, RDT encourages banks to engage in SBD as a way of influencing the flow of vital resources to the banks (e.g., knowledge, deposit and contracts). This theory therefore may provide an insight for the probable association between SBD and FP. Based on the usefulness of RDT in banks as discussed above, the study relies on it as a complementary external driver theory.

Additionally, neo-institutional theory (NIT) is the final complementary theory that this research depends on. It defines the concept of 'institution' as economic and social activities, rules and principles concerning diverse aspects of society (religion/politics/law) that are generally accepted (North, 1991; Powell & DiMaggio, 1991). Noticeably, 'economic institution' concept has two forms: formal (statutes/rules) and informal (norms/conventions). The focus of economic institutions should be about maximising economic growth (North, 1991; Scott, 2001). Hence, economic institution-based NIT is mainly concerned with the concept of 'economic-efficiency (Ntim & Soobaroyen, 2013)/ 'substantiveness' (Ashforth & Gibbs, 1990)/ 'instrumentality' (Aguilera et al., 2007). Following NIT tradition, economic institutions (nations/firms/groups) suggests that banks should prioritize the maximization of their own interests at the expense of the community members in which they operate (Aguilera et al., 2007). The implication is that, banks should strive to out-compete all other actors in the environment for scarce societal resources (Haque & Ntim, 2020).

Alternatively, sociologists provide a wider perspective of institutions. They contend that, institutions should not only focus on efficiently producing goods and services, but they should

also represent organizations of high social, environmental, ethical and moral values (Meyer & Rowan, 1977). Therefore, the sociologists' conceptualization of NIT contends that institutions will not only compete for the limited societal resources ('economic/substantive/instrumental') (Ntim & Haque, 2020), but may also try to gain the endorsement and support of the greater community for their existence rights ('social/symbolic legitimacy/moral') (Ashfort & Gibbs, 1990). Societal legitimacy entails exhibiting responsiveness of how the actions and inactions of institutions influence members in the society (Suchman, 1990).

Similarly, the study applies insights from NIT framework, with focus on SBPs that have been introduced in the region. This framework argues that banks may gain social legitimacy by voluntarily adopting and/or complying with recognized institutional standards, rules and norms (Scott, 2001). Accordingly, ESSA banks as economic institutions should comply with SBPs policies that are set by their national regulators (coercive/regulative pressures) (Clarkson et al., 2015). This can also serve as means of learning from best practice from peers (cognitive/educative/mimetic pressures) and/or as part of international standards (e.g., SDGs, Global Reporting Initiatives) (Haque & Ntim, 2020).

For instance, complying with SDGs may not only improve bank legitimacy by enhancing the banks' image, but also promote economic efficiency through having access to key resources. Examples of key resources in the banking system include easy access to finance or deposit by establishing links and securing the support of diverse powerful stakeholders. In this regard, banks may achieve this through the implementation of SBPs-based initiatives (Haque & Ntim, 2020). Arguably, such SBPs initiatives can improve the banks' image and legitimacy in the eyes of their influential stakeholders (legitimation'). In addition, this may decrease the operating costs of banks by improving efficiency and thereby enhancing the FP of banks (Haque & Ntim, 2020). The study therefore relies on NIT as an important external driver theory to investigate the impact of SBD on FP and the moderating effect of CG on the SBD-FP nexus.

Overall, following prior studies and suggestions (e.g., Haque & Ntim, 2020; Kartadjumena & Rodgers, 2019), and based on the importance of the five theories in CG related studies, this study applies insights from these theories to investigate the association among CGI, SBD and FP in ESSA context. These theories are appropriate and closely interrelated. As will be explained in section 3.2, collectively, they will contribute to throwing light on the often-complex agency relationships among shareholders, board, senior managers and other stakeholders. Accordingly, the study is positioned to contribute to this existing theoretical framework in literature by employing the provided integrated multidimensional theoretical framework.

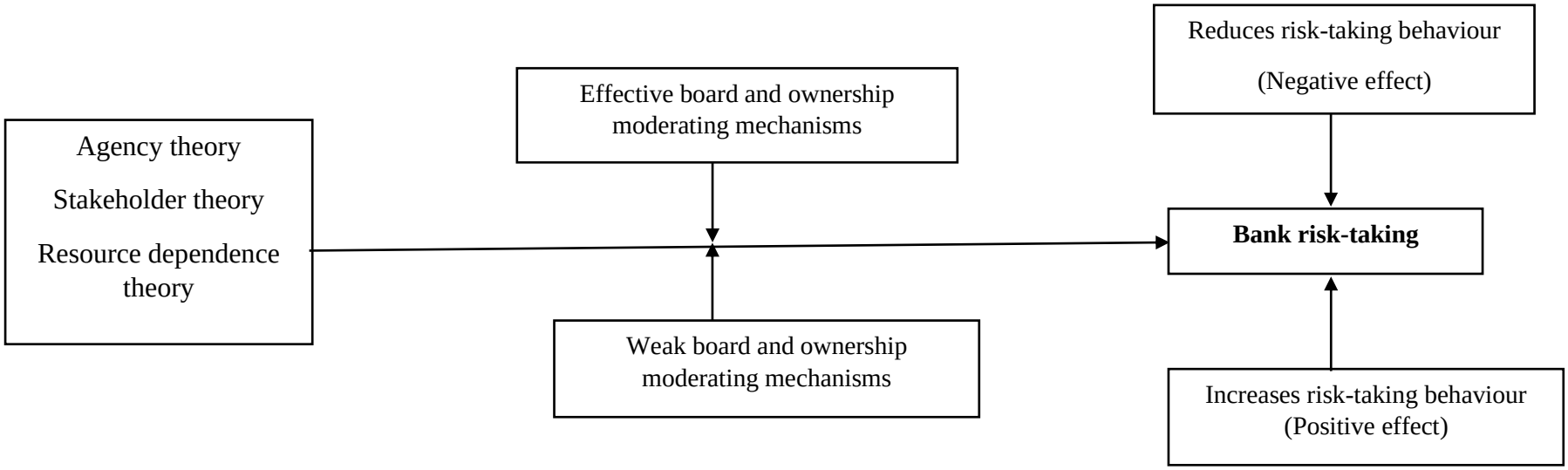
The extant banking literature has used several theories to shed light on the link between CG mechanisms and BRT in the region. Prior studies used agency theory alone (e.g., Akande, 2016; Bokpin, 2016), or in combination with other theories (e.g., Boubakri et al., 2013) to investigate this link. In line with recent calls (e.g., Haque & Ntim, 2020) for the adoption of multi-dimensional theoretical framework, the study adopts agency theory as the primary motivator, with stakeholder and resource dependence theories as secondary motivators for the study.

Third, and similarly the thesis interprets the results of the association among board attributes and ownership structures in the ESSA banks with AT, SHT and RDT as applied by Bokpin (2016) (see Fig 3.3). The cornerstone of AT centers on the assumption that the interests of the shareholders and senior managers may vary (Dawar, 2014). The separation of control of banks from their shareholders presents a typical agency conflict between senior managers and owners (Berle & Means, 1932). In terms of BRT, agency problem exists because the interest and risk-taking preferences of senior managers may not be aligned with shareholders (Jensen & Meckling, 1976). Thus, there is a call for effective governance structures that can properly align the conflicting interest of the managers and shareholders (Bokpin, 2016). Without this alignment, the preferences of senior managers and shareholders may be in convex concerning BRT behaviour (Bokpin, 2016).

On one hand, AT posits that, because of the 'convex pay-off' behaviour of profits in the banking system, shareholders tend to have a high penchant for excessive BRT in the absence of strict regulatory checks (John et al., 1991). Shareholders basically hold a 'call option' on bank's value (Bokpin, 2016; Galai & Masulis, 1976). The exercise price of this 'call option' is the total outstanding debt of the bank (Galai & Masulis, 1976). In weak external regulatory framework such as ESSA region (see Fig 3.3), shareholders of banks may be more motivated to increase their profit from this 'call option' by encouraging excessive risk-taking (Bokpin, 2016). When this excessive risk-taking pays-off, shareholders pay back debtholders (depositors) and benefit from the abnormal returns (Bokpin, 2016). However, when the high risk does not succeed, shareholders risk losing the capital they initially invested in the bank (Bokpin, 2016). This is due to the fact that banks are limited liability companies.

On the other hand, AT suggests that, senior managers tend to be risk averse (Andries et al., 2020). The is based on the suggestion that, managers of banks are conservative in their decision because of their inability to diversify their portfolio unlike shareholders (Andries et al., 2020). Therefore, senior bank managers have reasons to prefer less BRT.

Fig 3.3: An integrative framework of board attributes and ownership structures on bank risk-taking



Source: Adapted from Bokpin, (2016).

Managers have their wealth mainly dependent on the banks that they manage (Pathan, 2009). In order to protect their interest in banks, senior managers will either opt for excessively safe assets or diversification. For example, they might reduce investments in high risky projects although such projects may have a positive net present value (Andries et al., 2020). Again, unlike bank owners who can possibly rely on diversification of their portfolio risk in the capital market, senior managers can only reduce their portfolio risk at the bank level (Bokpin, 2016). They therefore have more motivation to ensure diversification on bank level because they are incapable of reducing their portfolio risk in the capital market (Bokpin, 2016). Further, shareholders may also be rewarded by the number shares they hold in a bank, whereas bank managers are rewarded through wages and salary packages (Bokpin, 2016). The implication is that, because managers are compensated through wages and salary agreements which are mainly fixed especially in ESSA region, they have a tendency to be more conservative (Bokpin, 2016). Hence, managers of banks do not have much to gain from abnormal profit resulting from excessive BRT but may lose the whole lot in an event that the bank fails including their reputation (Cornett et al., 2006).

Accordingly, AT makes the following crucial contributions with regards to BRT. First, it suggests that, EXPERT have a superior monitoring ability which can reduce management opportunism (Jensen & Meckling, 1976). Thus, the theory predicts that the appointment of majority EXPERT to the board may limit senior managers from engaging in excessive BRT. Second, and consistent with the CG codes in the region, AT calls for regular board meetings (Conger et al., 1998; Jensen & Meckling, 1976). It argues that, regular board meetings will lead to better monitoring which can limit managers' discretion, thereby reducing excessive BRT (see Fig 3.3).

Finally, AT advocates for the participation of more institutional investors by suggesting that, when institutional investors have substantial investments in several banks operating in the same region, then they will be interested in maximizing the return on all the shares in the region. In this case, excessive BRT among the invested banks may be undesirable to such institutional investors as it could potentially reduce the profit margins within the portfolio (OECD, 2017).

To sum up, the CG codes in the region seek to lessen agency issues between senior managers and owners of banks through effective monitoring by board. This is particularly important in ESSA due to the presence of highly concentrated ownership in the banking system (e.g., Bokpin, 2016). Such ownership concentration can undesirably influence the rights of minority

owners and other stakeholders. This creates divergence of interest between small and large owners of banks. In particular, large shareholders may possibly use their influence to appoint their relatives or friends to key managerial positions. The appointment of such managers will imply that these senior managers may be seek the interest of large owners who influenced their appointment at the expense of minority owners in the bank (Albassam, 2014). Additionally, it is possible that politically linked persons can be selected as senior managers short of due diligence such as their capacity to perform such roles (Albassam, 2014). Such appointments may have detrimental effect on BRT. Hence, the application of an AT perspective is crucial in ESSA banking system. The study therefore depends on AT as the theory that offers the foundation of opinions in literature and the hypothesis development.

Again, SHT provides much wider viewpoint of internal CG framework. The notion of the stakeholder is seen as give-and-take relationship in which a stakeholder is a party that relies on the bank to attain its own goals and on which the bank relies on for its survival (Rhenman & Stymne, 1965). Banks typically have several stakeholders including depositors, borrowers, debtholders, employees, regulators and the community (Bonnafous-Boucher & Rendtorff, 2016). SHT suggests that, the legitimate interests of the broader stakeholders of banks should be considered by bank managers (Frynas & Yamahaki et al., 2016). This may explain why senior managers may opt for safe investments and avoid excessive BRT in order to protect the interest of all stakeholders.

SHT has several implications on BRT within ESSA context. The theory posits that, shareholders of banks are entitled to most of the benefits of excessive BRT by managers (Bonnafous-Boucher & Rendtorff, 2016). However, with regards to losses, owners of banks are only held liable to a total amount of the capital they initially invested in the bank (Bonnafous-Boucher & Rendtorff, 2016). The implication is that, banks shareholders may adopt a strategy which can compel managers to undertake high risky projects. They will pay no attention even when the associated risk of such projects is greater than what other stakeholders of the bank may consider as tolerable BRT. By contrast, SHT argues that non-shareholding interest groups of banks tend not to be interested in encouraging managers to engage in excessive risk-taking (Bonnafous-Boucher & Rendtorff, 2016). Such interest groups of the bank are rather much interested in the long-term sustainability of the banks (Bonnafous-Boucher & Rendtorff, 2016). They are typically considered as stakeholders with predetermined claim. They will receive allotted or predetermined streams of income no matter the profit recorded by the bank (Bonnafous-Boucher & Rendtorff, 2016). Therefore, the theory calls for

strict discipline of managers by EXPERT since they can provide better monitoring (Laeven, 2013). Additionally, the theory recommends regular board meetings to ensure more discussions about BRT decisions.

In conclusion, in an environment where the institutional framework is strong, the interests of all stakeholders are protected by powerful state institutions. However, countries in ESSA have been identified to have weak institutional environment. This calls for strong internal governance mechanisms. One key internal CG mechanism that can strengthen governance in the banking sector is the board. For example, consistent with SHT, the Combined Code mandates the board to strictly monitor managers to ensure risk-taking is consistent with the risk preference of all the major stakeholders. This study relies on SHT as a complementary theory to AT which can potentially enhance the investigation of the link between board mechanisms and BRT in the countries in the ESSA region.

Crucially, RDT is related to the pioneering scholarly study of Pfeffer & Salancik (1978). Their proposition was based on the argument that banks heavily depend on active players in the environment. These active actors are essential because they are the channels through which essential resources may flow to the bank and thereby ensuring the sustainability of the bank. Because of this crucial link, banks are encouraged to prioritize the demand of actors in the communities that they operate so as to have access to these resources which will guarantee their own survival and long-term sustainability. Within this framework, board and ownership structures are viewed as key governance mechanisms that can influence BRT behaviour.

The theory proposes that the board should be considered as a useful connection between the bank and players in the environment who control vital resources needed for the banks' survival (Pearce & Zahra, 1992; Pfeffer, 1972). This suggests that, the growth and continued existence of banks largely depend on the actions of the board. From this perspective, the board may influence BRT behaviour in two main ways. The board is to offer advice and counsel to managers concerning investments decisions (Pfeffer & Salancik, 1978). For example, quality advice and counsel by the board may curb the tendency for managerial opportunism and excessive BRT. Crucially, the board should provide legitimacy to the transactions of the bank to ensure the flow of critical resources (Pfeffer & Salancik, 1978). For example, the general practice in the banking system is that, loans above a certain threshold should be recommended by management for approval by the board. Thus, the board has the power to decline loans that are inconsistent with the risk preference of the bank.

Furthermore, RDT highlights the role ownership structures play in ensuring the flow of critical resources to banks. It posits that the agency conflict may be reduced by putting in place owners with better capacity to monitor managers (Jafarinejad et al., 2015). For example, large equity holdings by institutional investors can empower them to better monitor BRT behaviour by managers. Hence, banks can leverage on such investors as critical resources to curtail excessive BRT.

Given the valuable nature of cooperation and reciprocal action of the different interest groups and banks which ensures the drive of essential resources to banks, the theory has key implications for BRT in the region. In terms of composition of the board, RDT suggests that banks can appoint more EXPERT to the board. This may signal to stakeholders that the bank has the needed expertise to run the affairs of the bank, and hence attract the needed critical resources such as deposit. The bank can also benefit from their expertise in terms of early spotting of risk and preferring of risk-mitigation solutions (Apergis, 2019). Besides appreciable knowledge of banking can lead to effective monitoring and oversight of BRT in the region (Wang & Zhu, 2015).

The theory specifies that different forms of ownership structure can influence BRT. For example, public pension fund investors have substantial stakes in the countries across the region. The benefit of such shareholders is in twofold. Typically, pension fund investors have low risk preference due to the long-term nature of their commitment to their clients (pensioners). In this regard, such dominant institutional investors with substantial voting power can reduce BRT by imposing their low risk preference on senior managers. Moreover, there is the tendency for such institutional investors to join forces to effectively monitor managers and limit excessive BRT in the ESSA region (see Fig 3.3).

Similarly, government ownership in banks may imply receiving the necessary funding from government. Arguably, this may guarantee huge financial resources with little costs, however, this may also influence BRT in ESSA context. As discussed earlier, substantial state-ownership in banks in the region has been transferred to foreign banks. This facilitates the flow of non-financial resources such as import of skills and expertise from foreign owners in developed countries. Importantly, it can potentially lead to local banks receiving financial resources such as having access to external financing in the international market as well as foreign financing from the foreign investors or banks. Nevertheless, this can influence BRT in the region. The study therefore applies RDT as a second complementary theory to AT to explain the

relationship between CG and BRT in the region. Overall, based on the importance of the three theories, the study applies insights from them to examine the connection between CG and BRT in the ESSA region. Accordingly, this thesis is positioned to contribute to current theoretical framework by relying on the provided multiple theoretical framework.

3.2 Empirical evidence and hypotheses development

This section provides the empirical evidence and hypotheses development. Additionally, the section highlights the gaps in literature and suggests how the gaps in literature are addressed by the thesis. The section is divided into three main parts. In Section 3.2.1, the thesis provides empirical evidence and develops hypotheses on the association among CGI, EC and SBD in the ESSA banks. Section 3.2.2 discusses the empirical evidence and sets hypotheses on the association among CGI, SBD and FP of banks in the ESSA countries. Finally, section 3.2.3 focuses on the empirical evidence and the development of hypotheses on the relationship among board attributes, ownership structures, competition and BRT in the ESSA banks. The review will be structured as follows:

Throughout the thesis, the review of literature will be structured as follows. To start with, for every variable, the appropriate theoretical perspective will be explained. Next, the related international empirical literature concerning that particular variable will be provided. The main differences between the current study and previous literature will be addressed. Also, where applicable, related banking studies in the ESSA region will be provided, with particular emphasis on explaining the major differences between prior evidence and this study. To conclude, a suitable hypothesis within the ESSA banking system concerning the variable and the conceptual framework of the study where appropriate will be provided.

3.2.1 Empirical evidence on the association among CGI, EC and SBD

This section reviews banking literature on CG, EC and SBD. In reviewing the empirical literature, the theoretical perspectives considered in section 3.1 will be totally integrated into the fundamental arguments. Subsection 3.2.1.1 focuses on CG disclosures and EC. Subsection 3.2.1.2 reviews empirical literature on the association between EC and SBD. Subsection 3.2.1.3 focuses on empirical studies on the moderating effect of CG disclosures on the association between EC and SBD.

3.2.1.1 A broad CG disclosure index and executive compensation

Agency theoretical literature has proposed various monitoring mechanisms (e.g., quality CG structures) and incentive arrangement (e.g., EC incentives) approaches to minimise agency issues in banks (Elmagrhi et al., 2020). Accordingly, prior literature on CG and EC has primarily employed two contrasting views of agency theory namely: MPH and OCT (e.g., Elmagrhi et al., 2020; Ntim et al., 2019; Ntim et al., 2015; Jensen & Murphy, 1990).

First, managerial power hypothesis view posits that in banks with poor internal governance mechanisms, opportunistic senior managers may expropriate the resources of the bank. For example, given the power to determine their own pay, powerful senior managers of banks may expropriate the resources of banks through excessive compensation (Elmagrhi et al., 2020). Therefore, managerial power hypothesis perspective functions better in banks with poor internal CG setting. The poor CG structure is characterized by banks with weak corporate boards but influential senior managers including CEOs (Ntim et al., 2015). The outcome of this is the creation of ineffective managerial contract which ultimately increases agency problems (Bebchuk & Weisbach, 2010). This is due to the divergence of interests between bank senior managers and stakeholders particularly shareholders (e.g., Elmagrhi et al., 2020; Sapp, 2008). Managerial power hypothesis states that, under weak governance settings, senior managers can manipulate the board and award themselves with excessively generous compensation plan (Elmagrhi et al., 2020; Ntim et al., 2015). Consequently, such weak managerial contracts tend to pay executives of banks higher than banks with strong CG structures (better-governed banks).

On the contrary, OCT suggests that in banks with effective CG structures, EC arrangements can be structured such that it may align senior managers and stakeholders' interests (Jensen & Meckling, 1976). The implication is that, this theory is expected to be more applicable in banks with good CG structures (Elmagrhi et al., 2020). Unlike MPH, the theory views the interaction between independent corporate boards and senior bank managers as effective (e.g., Elmagrhi et al., 2020; Ntim et al., 2015). Therefore, the proponents of the theory suggest that such arrangements should not be interrupted because it enhances the value of the bank by creating efficient managerial contracts (Ntim et al., 2015; Jensen & Murphy, 1990).

Accordingly, OCT predicts that agency conflict should lessen due to proper alignment of the interest of senior managers and shareholders in such banking environment (Ntim et al., 2015; Tang, 2012). Essentially, because executives often do not have full control over their

remuneration, the theory predicts that CG structures can be used to align the interest of senior managers and stakeholders. In a good CG setting, executives of banks have less power in terms of their compensation packages (Edmans & Gabaix, 2009. This arrangement allows the board to structure EC packages in such a manner that it may influence the performance of the executives (Elmagrhi et al., 2020). The implication is that, such effective managerial contracts are more likely to pay lower compensation packages to executives than in a banking setting where there are poor governance mechanisms.

In practice, this expectation is reflected in the sustainability and CG reforms implemented across the banking system in ESSA countries. For example, consistent with OCT, the CG codes issued in the region suggest that good CG structures including board disclosures, accounting and transparency, risk management, shareholder rights and activism can limit excessive executive compensation in the banks. The CG reforms therefore incorporate the expectation that effective internal governance mechanisms can determine the level of executive compensation in the regions' banking system.

Studies exploring the influence of broad CGI on executive compensation are scarce (Ntim et al., 2015), especially in the banking system in ESSA. As a result, this provides prospects to make original contribution to the banking literature. Nevertheless, prior evidence in the non-financial sector suggests that CG disclosure indices have negative impact on executive pay of firms (e.g., Elmagrhi et al., 2020; Ntim et al., 2015; Ntim et al., 2012). Essentially, because well-governed banks tend to have superior financial performance than poorly-governed banks, the study expects that banks with high CGI may be in a better position to limit excessive executive compensation. Indeed, Elmagrhi et al. (2020) and Ntim et al. (2015) provide rare findings that lend support to this suggestion in the non-financial sector. Elmagrhi et al. (2020), for example, investigate the effect of CG disclosures on executive pay in a sample of 100 non-financial firms in UK from 2008 to 2013. Their evidence suggests that, well-governed firms in UK pay their CEOs and executives far lower than poorly-governed firms.

More importantly, their results indicate that good CG disclosures impact on both the level and the structure of executive pay in UK. Notwithstanding the importance of their evidence, the study focused on non-financial sector in a developed economy. Also, Ntim et al. (2015) evidence focused on executive compensation and corporate governance in South Africa. Although the findings of their findings is very crucial, the study was based on a sample of 169 non-financial firms in South Africa from 2002 to 2007. Besides focusing the non-financial

sector, they used single CG measures such as board size, independence, institutional ownership and block ownership as the measure of complex CG.

Noticeably, these prior studies (e.g., Elmagrhi et al., 2020; Ntim et al., 2015; Ntim et al., 2012) have focused on either the non-financial sector in a developed economy and/or have employed individual CG variables in their investigations. This limits the generalization of their findings. Therefore, the likely impact of corporate governance disclosures on executive compensation within the banking sector in emerging economies such as ESSA is limited. The current thesis attempts to fill this gap by focusing on the banking sector in ESSA countries as well as employing a broad CG disclosure index and three measures of EC (executive directors pay, non-executive directors pay and the total pay for all directors) over a relatively longer period which will offer new insight from an emerging economy context.

Accordingly, and consistent with the objectives of the considerable CG and executive pay reforms (e.g., Ghana SEC code, 2018, 2012, 2010; Nigeria SEC code, 2018, 2011; Kings Report, 2016; Kenya CG code, 2016) that have been implemented in the ESSA region over the past two decade, the study assumes that in banks with good CG mechanisms, senior managers will have less power in terms of determining their own remuneration packages. This may limit excessive EC in the region's banking system as shown in Fig 3.4 (*H1*). Therefore, the first hypotheses of the study to be tested are:

Hypothesis 1a. *There is a negative association between internal corporate governance disclosure index and compensation of executive directors of banks in ESSA region.*
Hypothesis 1b. *There is a negative association between internal corporate governance disclosure index and compensation of non-executive directors of banks in ESSA region.*
Hypothesis 1c. *There is a negative association between internal corporate governance disclosure index and compensation of all directors of banks in ESSA region*.

3.2.1.2 The effect of executive compensation on sustainable banking disclosures

Corporate executive compensation in the banking system is a subject of public interest (Conyon, 2011), as it generates press coverage and comment (Emerton & Jones, 2019). One key approach of addressing agency conflict in the banking system is to align the interests of shareholders and senior managers. Primarily, incentive compensation in theory remunerates senior managers of banks for good performance which profits shareholders (Emerton & Jones, 2019; Jensen & Murphy, 1990). Thus, executive compensation can be used to align or attempt

to align the interests of shareholders and senior managers in the banking system (Emerton & Jones, 2019; Arora & Alam, 2005). The implication is that EC can be used to incentivise senior bank executives to deliver higher sustainable banking performance (Dittmann et al., 2017). For example, within the banking system, targets setting and monitoring of incentives within EC can serve as motivational strategy (Pepper & Gore, 2015). Thus, the role of corporate executives in catalysing progress with SDGs in any banking system cannot be overemphasized (Nwagwu, 2020). For example, the adoption and integration of the SBPs into bank's operations are largely driven by corporate executives. Theoretically, there are two major opposing views on the likely impact of executive compensation on sustainable banking; optimal contrasting theory (OCT) and managerial power hypothesis (MPH) (e.g., Ntim et al., 2019; Kartadjumena & Rodgers, 2019; Ntim et al., 2015).

On the one hand, managerial power hypothesis views EC arrangements as a product of close negotiations between powerful senior managers and weak boards leading to the creation of inefficient managerial contracts and the exacerbation of agency conflict (e.g., Ntim et al., 2019; Bebchuk et al., 2002). Accordingly, during the design of executive compensation packages, the board cannot be expected to handle and bargain at arm's length with managers (Kartadjumena & Rodgers, 2019). This is largely due to the excessive managerial power. It has been suggested that two main agency conflicts originate from excessive managerial power (Ntim et al., 2019). A first-tier agency conflict looks at the tendency of influential CEOs to manipulate director appointment in order to gain control in board decisions (Ntim et al., 2019), thereby facilitating excessive executive compensation in the banking system (Gomez-Mejia eta al., 1987).

A second-tier agency conflict arises because non-executive directors may reward powerful CEOs and senior managers with a disproportionately high remuneration in return for a comparable and reciprocal backing from them (Ntim et al., 2019; Morse et al., 2011; Core et al., 2003). Under such arrangement, linking executive compensation with sustainable banking practices may not necessarily lead to improved sustainable banking performance. This is because executives and non-executives are assumed to structure their own compensation in a reciprocal (give-and-take) arrangement. Thus, the theory claims that executive compensation may not be linked necessarily to SBD, hence may not incentivize managers to work towards achieving SDGs. Compensation arrangements that are excessively influenced by senior managers due to weak CG can lead to a decrease in long-term value of the bank (Pepper & Gore 2015; Bebchuk & Fried, 2005), and a decoupling of pay-for-sustainability sensitivity (Emerton & Jones, 2019). Therefore, whether executive compensation is linked with

sustainable banking or not (Elmagrhi et al. 2020; Kartadjumena & Rodgers, 2019), managerial power hypothesis expects a negative pay-for sustainability sensitivity (PSS).

On the other hand, optimal contrasting theory suggests that executive pay results from close arrangement between strong corporate board and senior managers (Conyon, 2014; Edmans & Gabaix, 2009). This creates efficient managerial incentive contracts (Jensen & Murphy, 1990). The implication is that, in banks with good CG mechanisms, executive compensation schemes can be structured in such a manner that it aligns managers and stakeholders' interests (e.g., He et al., 2014; Jensen & Meckling, 1976).

The theory relies on the expectation that senior managers have less influence in determining their own remuneration (e.g., Upneja & Ozdemir, 2014; Dong et al., 2010). Because executives do not have full control over their remuneration, optimal contrasting theory framework suggests that executive compoensation can be an effective tool in advancing progress towards attaining the SDGs. This is premised on the notion that because executives have minimal influence on their compensation schemes, EC can be linked to sustainable banking performance. This can direct senior managers attention towards long-term value creation such as sustainable banking. Accordingly, the theory suggests that one useful link in the chain of improving sustainable banking is to tie improvements to EC. This leads to EC packages that are able to drive and optimize managerial performance in key areas such as SBPs targets. Therefore, optimal contrasting theory predicts a strong positive relationship between EC and SBD (e.g., Upneja & Ozdemir, 2014; Dong et al., 2010), implying a strong pay-for-sustainability sensitivity.

The consensus is that, the market tends to encourage SBPs by awarding banks with superior sustainability performance with high appraisal and vice-versa (e.g., Haque & Ntim, 2020; Haque, 2017). Hence, well-meaning bank boards may use motivation-based approach, such as executive compensation to incentivise senior managers to engage in sustainability investments, which can improve the organizational legitimacy (Campbell et al., 2007). This may in turn enhance the economic benefits and financial performance of banks.

Incentive based compensation for executives in the banking system is key due to a number of reasons. First, it has been suggested that, influential executives may be unwilling towards pursuing SBPs since such investments may necessitate considerable capital investments amidst unpredictable financial payback in the short-term (Haque, 2017). Second, SBPs initiatives especially environmental activities necessitate labour intensive and highly skilled workforce to

design and implement (Haque & Ntim, 2020). Examples of such initiatives include advancing non-polluting products, green finance or minimizing the danger of environmental disasters (Haque & Ntim, 2020; Berrone & Gomez-Mejia, 2009). Thus, banks may have to rely on appropriate incentives in order to attract and motivate such experts (Berrone & Gomez-Mejia, 2009). In addition, it has been suggested that, banks with generously remunerated executives may be exposed to public and media scrutiny (Haque & Ntim, 2020). Consequently, banks offering attractive compensation packages may be subjected to public scrutiny to continue engaging in SBD linked initiatives as a way of minimizing possible undesirable media attention (Haque & Ntim, 2020). This can improve the banks' legitimacy.

Banking studies examining the relationship between EC and SBD are largely uncommon and hence, this offers a fertile field for further investigation (Kartadjumena & Rodgers, 2019). However, the limited findings of prior studies are mainly in line with OCT that EC can be designed to motivate senior managers to pursue higher SBD in such a manner that it links up executives' interest with that of the wider stakeholders (e.g., Haque & Ntim, 2020; Kartadjumena & Rodgers, 2019). For example, Kartadjumena and Rodgers (2019) investigate whether EC can motivate managers to pursue corporate sustainability concerns as measured by Global Reporting Initiative (GRI) disclosure indicators in a sample of 39 Indonesian banks over the period 2007-2014. Their results suggest that higher EC motivates managers to engage in more climate and environmental concerns which also enhances FP of the banks. Similarly, D'apolito et al. (2019) provide evidence from 42 European banks over the period 2013-2017 that shows that, the implementation of sustainable criteria in the banks' remuneration contracts is positively associated with sustainability performance. The difference between these prior banking studies and this thesis is that, Kartadjumena and Rodgers (2019) is based on only one dimension of SBD (environmental performance), whilst D'apolito et al. (2019) focused on developed banking sector (European banks). This thesis focuses on seven dimensions of SBD in 16 ESSA countries.

With reference to ESSA banking sector, studies examining the influence of EC on SBD are sparse, and consequently this study serves as a timely contribution to the existing sustainable banking literature. Waweru et al. (2009) examine the level and structure of EC schemes in the banking industry in Canada (8 banks) and South Africa (4 banks) in 2005. They report a positive association between CEOs compensation and the FP of banks. In line with the positive prediction of OCT and consistent with the expectation of the recent SBD and EC reforms that have been pursued in the region, the study predicts that EC incentives can influence SBD. The

study expects the pay-for-sustainability sensitivity to be positive based on the traditional economic view that considers cash compensation as an indicator of success and satisfaction (Kartadjumena & Rodgers, 2019). Hence, executive compensation incentive scheme can be an effective tool to align senior managers' self-interest in maximizing its wealth with the "bank common good" results by engaging in more sustainability responsible actions (Kartadjumena & Rodgers, 2019). Therefore, as depicted in Fig 3.4 (*H2*), the study proposes that executive compensation may serve as an effective governance structure that can increase sustainable banking. Accordingly, the study sets the following hypotheses:

Hypothesis 2a*: There is a positive association between executive compensation and the composite sustainable banking disclosures.*

Hypothesis 2b*: There is a positive association between non-executive compensation and the composite sustainable banking disclosures.*

Hypothesis 2c*: There is a positive association between the total compensation for all directors and the composite sustainable banking disclosures.*

In addition, it is crucial to point out that the multi-dimensional nature of SBD and the need to disaggregate it into individual dimensions to advance a deeper insight of the link. Thus, the study anticipates that the three key components of executive compensation variables will positively influence the individual dimensions of SBD as captured in Fig 3.4 (*H2*). As a result, the study develops the next hypotheses focusing on the probable impact of the individual components of executive compensation on the individual dimensions of SBD as follows:

Hypothesis 2d*: Executive compensation has a positive association with the individual dimensions of sustainable banking disclosures.*

Hypothesis 2e*: Non-executive compensation has a positive association with the individual dimensions of sustainable banking disclosures.*

Hypothesis 2f*: Total compensation for all directors has a positive association with the individual dimensions of sustainable banking disclosures.*

3.2.1.3 The moderating effect of CGI on the pay-for-sustainability sensitivity

From optimal contrasting theory perspective, in banks where CG structures are effective, EC incentive can be structured in such a manner that it supports the proper orientation of

executives, shareholders and other stakeholders' interests (e.g., Kartadjumena & Rodgers, 2019; Jensen & Meckling, 1976). Accordingly, it has been suggested that compensation-based approach of CG can be influential tool that may shift corporate accountability towards SBD (Tauringana & Chithambo, 2015). In addition, good CG can enhance the boards' monitoring mechanisms of management behaviour such as the opportunistic behaviour of senior managers in the banking sector (Kartadjumena & Rodgers, 2019). This can improve the pay-for-sustainability sensitivity (Ntim et al., 2015). In this case, OCT predicts that, effective internal governance mechanisms tend to have a strong positive impact on the pay-for-sustainability sensitivity in the banking system. In other words, the more banks adopt quality internal governance disclosures, the better the pay-for-sustainability sensitivity.

On the other hand, managerial power hypothesis maintains that senior managers of banks have much influence in structuring their own compensation, and that they tend to rely on this influence to expropriate shareholders wealth (Ntim et al., 2015; Bebchuk & Fried, 2003). In this vein, Elmagrhi et al. (2020) suggest a weak association between the interaction of CGI and EC (i.e., CGI*EC) and the SBD. The implication is that, within MPH framework, the moderating role of CGI on the pay-for-sustainability sensitivity may be relatively weak in the banking system (Kartadjumena & Rodgers, 2019).

However, prior banking studies (e.g., D'apolito et al., 2019; Kartadjumena & Rodgers, 2019; Waweru et al., 2009) that have examined the pay-for-sustainability sensitivity have not yet explored the potential moderating impact of CG disclosure index on the pay-for-sustainability sensitivity. Meanwhile, it has been argued that, because monitoring (CG) and incentive alignment (EC) approaches are usually applied collectively by banks to address agency conflict, they can be interconnected or interdependent before they may be effective in the banking system (Grewatsch et al., 2017; Ntim et al., 2015). A unique means of factoring such probable interdependencies into consideration and enhance the pay-for-sustainability sensitivity is to carry out an investigation involving an interaction terms among the SBD incentive (EC) and monitoring (CG disclosure) structures (Elmagrhi et al., 2020).

For instance, as shown in Fig 3.4 (*H3*), it is possible good CG disclosures can increase monitoring of opportunistic behaviour of bank senior managers and thereby limiting the tendency for excessive EC. Besides limiting excessive EC, such good governance structures may play a pivotal role in aligning the interest of the executives of banks with the long-term sustainability and growth of banks. Therefore, if better internal governance structures are

generally associated with lower executive compensation and greater engagement in sustainable banking, then linking executive compensation with sustainable banking targets due better governance system should represent an enhancement tool for SBD (D'apolito et al., 2019; Ntim et al., 2015). Arguably, this can improve the pay-for-sustainability sensitivity in the banking system.

Therefore, effective CG mechanisms arising from corporate board structures, such as board and director, accounting, audit and transparency, effective monitoring by shareholders and executive pay disclosures can influence executive compensation and to an extent SBD (Nigeria CG Code, 2018). For example, effective managerial monitoring associated with sustainability progress linked to executive compensation by independent board may incentivise bank senior managers to increase their SBD activities (Elmagrhi et al., 2020; D'apolito et al., 2019). Further, compliance, shareholder rights and enforcement structures can mitigate agency conflicts (Ntim et al., 2015). For instance, effective internal CG such as higher activism by institutional investors can moderate the pay-for-sustainability sensitivity (Ntim et al., 2015).

Prior banking research has examined the direct impact of executive compensation on SBD without taking in to account the probable moderating influence of CGI on the link (e.g., D'apolito et al., 2019; Kartadjumena & Rodgers, 2019). As a result, the objective of this study is to contribute to the existing international sustainable banking literature by exploring the pay-for-sustainability sensitivity and ascertains whether broad CG disclosure mechanisms can positively moderate the pay-for-sustainability sensitivity. Accordingly, the thesis proposes that effective internal corporate governance mechanisms as measured by compliance with the regional Combined corporate governance Code (e.g., Nigeria SEC 2011; 2018; Ghana SEC 2010; Kenya, 2016) can influence the relationship between executive compensation and sustainable banking disclosure in the banking system in the ESSA countries.

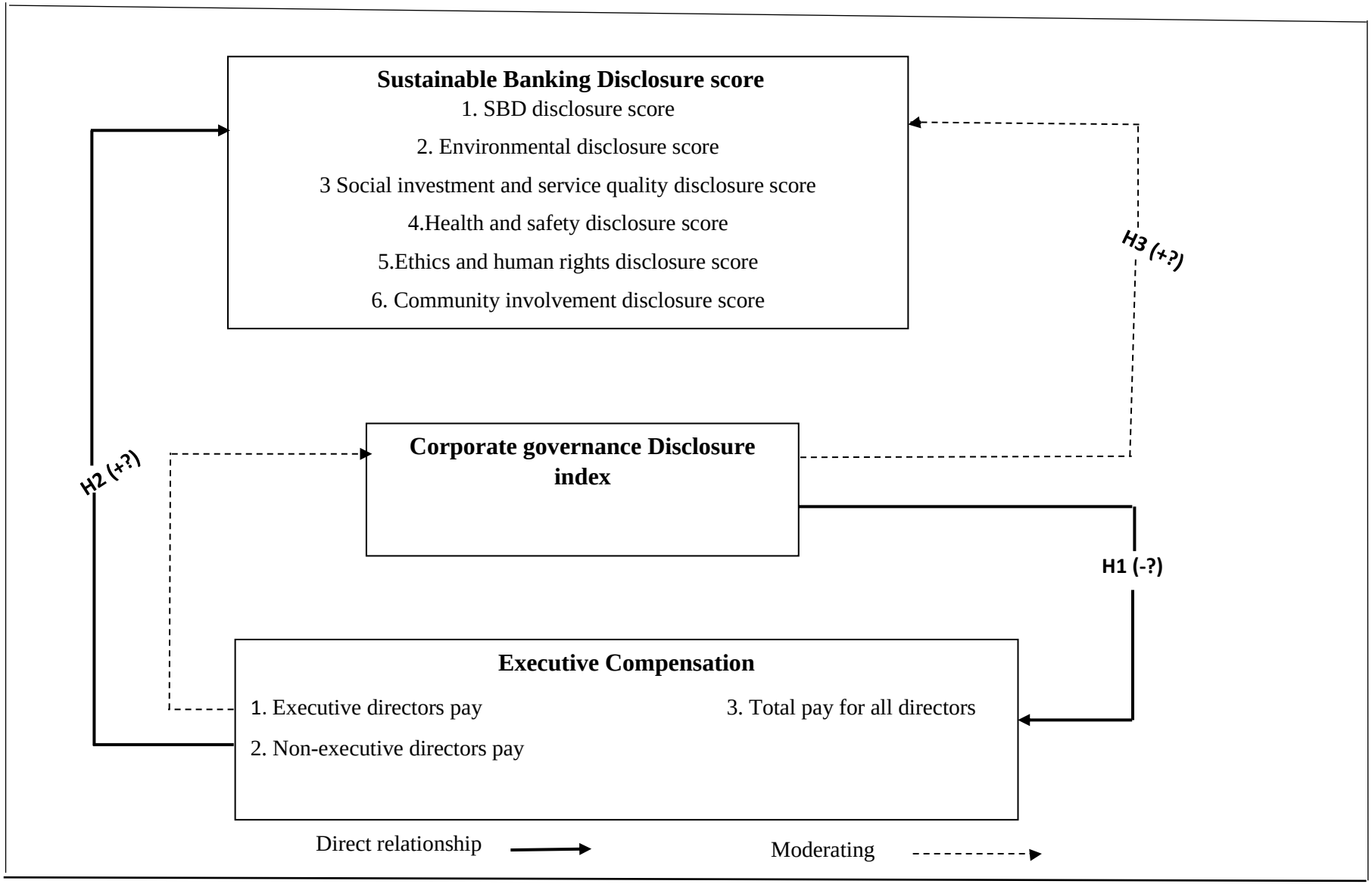
Additionally, the thesis expects that, the pay-for-sustainability sensitivity will be stronger in banks with high internal corporate governance disclosure score (better-governed banks), but weaker in banks with low corporate governance disclosure score (poorly-governed banks). Hence, the next set of hypotheses to be examined are:

Hypothesis 3a*: Corporate governance disclosure index moderates the relationship between executive directors pay and sustainable banking disclosures, with the executive directors pay-for-sustainability (PSS) being stronger in banks with high internal corporate governance disclosure index.*

***Hypothesis 3b**: Corporate governance disclosure index moderates the relationship between non-executive directors pay and sustainable banking disclosures, with the non-executive directors pay-for-sustainability (PSS) being stronger in banks with high internal corporate governance disclosure index.*

***Hypothesis 3c**: Corporate governance disclosure index moderates the relationship between total executive directors pay and sustainable banking disclosures, with the total executive directors pay-for-sustainability (PSS) being stronger in banks with high internal corporate governance disclosure index.*

Fig 3.4: Conceptual framework of hypothesis development for pay-for-sustainability sensitivity



3.2.2 Empirical evidence on the association among CGI, SBD and FP

This section reviews banking literature on CG, EC and SBD. In reviewing the empirical literature, the theoretical perspectives considered in section 3.1 will be totally integrated into the fundamental arguments. Subsection 3.2.2.1 focuses on CG disclosures and SBD. Subsection 3.2.2.2 reviews empirical literature on the association between SBD and FP. Subsection 3.2.2.3 focuses on empirical studies on the moderating effect of CG disclosures on the association between SBD and FP.

3.2.2.1 A broad corporate governance disclosure index and sustainable banking

Internal governance mechanisms and SBPs have been subjects of evolutionary tendencies, and research exploring in their possible association has been growing steadily (Gangi et al., 2019). As has been discussed in section 3 above, the theoretical recognition is that good internal CG mechanisms help in aligning managerial interests with the broader stakeholders of banks (Jensen & Meckling, 1976). AT framework describes internal corporate governance as a set of well-established bank structures that can align the interests of two key groups. These are the executives of the bank and the shareholders (Jensen & Meckling, 1976). The theory posits that a net decline in agency costs (monitoring) emanating from the establishment of good CG mechanisms may lead to an increase in SBD (Ntim & Soobaroyen, 2013). Within this perspective, better-governed banks may engage in SBD more than their poorly-governed counterparts (Frynas et al., 2016).

Next, RBV considers good CG mechanisms as bank specific capabilities that can enhance SBD (McWilliams & Siegel, 2011). It argues that a bank with quality CG can differentiate itself from competitors by engaging in key SBD investments. Such banks can gain reputation for sustainability management (Lourenco et al. 2014), social care and green novelties (Chen et al., 2006), thereby becoming attractive to investors and other stakeholders who are more concern about sustainability.

In support of above theories, NIT suggests that, conforming with good CG guidelines either through coercive or supervisory pressures in the form of improved SBD investments can enhance the legitimacy of banks' operation and services (Haque & Ntim, 2020). This can ultimately enhance the reputation of the bank (Suchman, 1995). Legitimacy motivates banks to engage and report SBD activities (Gangi et al., 2019). Therefore, NIT suggests that there is an implied social contract between banks and the society (Cormier & Gordon, 2001). To fulfil

contractual requirements of this relationship, banks can legitimize, maintain and enhance their legitimacy by disclosing their sustainability information (e.g., Mousa & Hassan, 2015; Branco & Rodrigues, 2008). Thus, banks with good CG tend to fortify their existence and earn social acceptance by engaging in SBD such as contributing to the well-being and prosperity of the society (Khan, 2010).

Also, SHT considers CG as a set of structures that ensure banks are accountable to a broader stakeholder groups (Gangi et al., 2019). This group consist of shareholders, customers and financial investors (Gangi et al., 2019). Accordingly, good governance is projected to sustain good dealings with various stakeholders who relate with the bank regardless of the existence of recognized agreements or not (Gangi et al., 2019). From SHT, good CG practices can be considered as a pillar that complements SBD (Ntim & Soobaroyen, 2013). It argues that CG is inextricably linked to SBD (Ntim & Soobaroyen, 2013), hence banks with quality internal CG structures may be motivated to engage in SBD initiatives as a reliable means of exhibiting their good governance to their stakeholders (Beekes & Brown, 2006). SHT therefore suggests that good CG should encompass broader CG disclosures which require not only uprightness, transparency and accountability to shareholders, but should also show great concern to all other stakeholders (Jamali et al., 2008). Thus, this framework suggests that the sustainable growth of banks depends on the support they receive from all their stakeholders (Orazalin, 2019).

Accordingly, the core principle of this theory is that banks can achieve their goals by balancing the conflicting interests and demands of various stakeholder groups (Freeman, 1984). The stakeholder groups of banks include employees, customers, suppliers, auditors, regulators, government, shareholders and the general public (Freeman, 1984). For example, stakeholders have specific needs and expectations of bank's SBD in areas such as environmental management, social, health and safety, community involvement, elimination of discrimination and employment of minority groups (Orazalin, 2019; Freeman, 1984). In this regard, banks with good CG will act in accordance with stakeholders' needs and expectations to gain their support by improving their corporate disclosures including SBD (Barako & Brown, 2008). Hence, the theory suggests that good CG will lead to improvements in SBD in the banking systems.

From RDT perspective, good CG mechanisms can bring valuable economic resources, information, skills, knowledge and recommendations for organizational success (Pfeffer & Salancik, 2003). In this case, CG mechanisms such as board disclosures serve as crucial link between banks and their external resources (Kiel & Nicholson, 2003), which can mitigate uncertainty through transparent and extensive SBD (Gangi et al.,2019).

Prior literature also suggests that CG mechanisms can impact on the outlook towards banks' compliance with sustainability initiatives, as well as all the components captured under the broad umbrella of SBD (e.g., Gangi et al., 2019; Jamali et al., 2008; Jo & Harjoto, 2012). Arguably, because quality internal corporate governance is connected with effective supervision and monitoring, it can be argued that, CG can serve as a stimulus for SBD initiatives (Ntim & Soobaroyen, 2013; Arora & Dharwadkar, 2011). Accordingly, it has been suggested that banks with good internal governance structures tend to operate in such a way that, it sustains good dealings with various stakeholders who interact with the bank even in the absence of recognized agreements (Gangi et al.,2019; Kendall, 1999). A few of such dealings in the banking industry are illustrated below.

It has been suggested that, shareholders of banks are increasingly demonstrating their sustainability concerns by exerting their right to influence the way banks operate (Dimson et al., 2015). Unlike traditional shareholder activism, such sustainability conscious shareholders continue to rely on effective CG that is receptive to SBD-oriented initiatives by focusing on the well-being of a wider perspective of stakeholders (Ntim, 2009). This may suggest that good CG mechanisms can positively influence SBD in the banking system.

Additionally, besides shareholders and from a wider approach of CG, protecting stakeholders of banks who do not possess formal power over senior managers is crucial in the banking system (Gangi et al., 2019). In this case, effective CG mechanism can be considered as a pivotal lever that impacts on a bank to work responsibly towards the various stakeholder groups who interact with the bank. Considerate about the wider necessities of bank's policy relative to focusing on only the interest of shareholder is in line with the idea of CG mechanism as a pillar of SBD (Gangi et al., 2019; Elkington, 2006). This is because the effectiveness of CG structures is a necessary requirement that guarantees responsible behaviour of senior managers towards all stakeholders (Huse, 2009). Hence, effective CG mechanisms are can be beneficial in implementing and maintaining SBD (Jamali et al., 2008). This view therefore highlights the probable beneficial effect that CG may have on SBD (Gangi et al., 2019).

Arguably, the objective of reducing probable conflicts of interest in the banking system far exceed the conventional conflict of interest between executives and shareholders (Gangi et al., 2019; Ntim & Soobaroyen, 2013). From the conflict resolution approach, effective CG mechanisms improve the status of social engagement as a pillar of SBD (Gangi et al., 2019). The implication is that, good CG mechanism is critical condition that can resolve potential conflict between senior managers of banks and their various stakeholders (Gangi et al., 2019;

Huse, 2009). Thus, this perspective also suggests that CG mechanisms can increase investments in SBD in the banking system (Gangi et al., 2019).

Moreover, good CG mechanisms are valuable in sustaining effective SBD (Jamali et al., 2008). For example, investors are increasingly becoming sensitive to how banks respond to social, natural conservation and environmental issues (Gangi et al., 2019; Ntim, 2009). In responds to that, banks with good CG structures tend to rely on SBD as way of signalling to these investors their CG quality (Beekes & Brown, 2006). In that regard, there is a call for strong CG mechanisms to support bank's involvement in SBD (Gangi et al., 2019; Ntim & Soobaroyen, 2013). Importantly, Walls et al. (2012, p.885) suggest that "since the turn of the 21st century, CG discussions have shifted progressively toward contemporary social issues (e.g., climate change, labour rights, and corruption) that matter to lawmakers, consumers, shareholders, and corporate managers in the marketplace." Accordingly, effective CG mechanisms represent an additional tool to address SBD pressures originating from diverse stakeholders (Gangi et al., 2019).

The empirical evidence linking broad CG disclosure index on SBD is largely uncommon and therefore, this offers a fertile ground for further studies. Indeed, prior studies mainly examine the impact of individual board structures on SBD (see Table 3.1). For example, Gupta and Bala (2020) investigate the effect of board committee disclosures in a sample of 24 banks in India over the period 2015-2016. They establish that, board committee disclosures relate positively with SBD. Orazalin (2019) explore the effects of board characteristics on SBD in a sample of 38 banks in Kazakhstan over the period 2010-2016. The results of the study reveal that board gender diversity has a positive influence on SBD, while board size and board independence have no impact on the level of SBD. Similarly, based on an international sample of 142 banks in 35 countries over the period 2011-2015, Gangi et al. (2019) document a positive effect of CG variables measured by board size, independence, gender and CEO duality on banks' environmental disclosures.

Likewise, Jizi et al. (2014) examine the same link in the US banking system with a sample of 193 banks from 2009-2011. They report a positive relationship between board independence, board size and SBD. They also document a negative link between CEO duality and SBD. Further, Das et al. (2015) examine 29 banks in Bangladesh from 2007 to 2011. Their results indicate a significant positive link between board size, ownership structure, and board independence and SBD. Additionally, Bukair & Rahman (2015) explore the same link in a sample of 53 Islamic banks in GCC countries for the year 2008. They establish that board size

has no significant impact on SBD. Their result shows no significant relationship between CEO duality and SBD, and a negative relationship between board independence and SBD.

As discussed above, prior banking studies on CG-SBD link have largely focused on the effect of individual board structures (e.g., Bukair & Rahman, 2015; Jizi et al., 2014). Banking CG studies that employ comprehensive CG disclosure in ESSA remain uncommon (Gangi et al., 2019). For example, Barako and Brown (2008) investigates the effect of CG attributes on social disclosures in 40 banks in Kenya from 2006-2007. They find that board gender diversity has a positive effect on social information disclosure. The study reports no significant relationship between foreign national and voluntary social disclosure. They report that board independence is positively associated with social disclosure. The study focused on a single country, analyzed only social factors with only 22 disclosure items.

As indicated earlier, the Combined Code in ESSA focuses on four main CG mechanisms as hallmark of quality CG mechanisms namely: (i) board and director, (ii) accounting, auditing and transparency, (iii) risk management, internal audit and control and (iv) compliance, shareholder rights and enforcement. The codes also specify six core SBD themes: (i) environmental, (ii) social, (iii) health and safety, (iv) ethics and human rights, (v) community involvement and (vi) employee disclosures. The theoretical perspective recognizes internal governance structures such as CG disclosures as pillar of SBD in the region (Gangi et al., 2019). Therefore, it is argued that quality CG may serve as a key motivator of higher sensitivity to SBD initiatives of banks in the region. In line with the recommendations of the Combined Code in ESSA, and given that good CG mechanisms can influence SBD, the study expects the CG disclosure index to increase the extent of SBD as captured in Fig 3.5 (*H4*). The study sets the following hypotheses:

H4a: There is a positive association between bank-level corporate governance disclosure index and SBD in ESSA, with the positive relationship being stronger in banks with high CG disclosure index.

Additionally, and delving deeper, several scholars (e.g., Platonova et al., 2018; Makni et al. 2009; Mahoney & Roberts, 2007; Mahoney &Thorne, 2005) have pointed out that the need to focus on the individual dimensions of SBD score when analyzing the influence of CGI on SBD, contending that the explanatory information is 'lost' when only the composite measure of SBD is employed (Johnson & Greening, 1999, p. 574). Subsequently, this study develops individual hypotheses as follows:

H4b: There is a positive association between bank-level corporate governance disclosure index and environmental dimension of SBD in ESSA banks.

H4c: There is a positive association between bank-level corporate governance disclosure index and social dimension of SBD in ESSA banks.

H4d: There is a positive association between bank-level corporate governance disclosure index and, health and safety dimension of SBD in ESSA banks.

H4e: There is a positive association between bank-level corporate governance disclosure index and, ethics and human rights dimension of SBD in ESSA banks.

H4f: There is a positive association between bank-level corporate governance disclosure index and community involvement dimension of SBD in ESSA banks.

H4g: There is a positive association between bank-level corporate governance disclosure index and employee dimension of SBD in ESSA banks.

Table 3.1: Summary of prior banking studies on CG-SBD nexus

Publications	**Employed data**	**Period of study**	**CG measures**	**SBD measures**	**Findings and conclusions**
Gupta & Bala (2020)	Indian banking system *24 banks*	2015-2016	Board committee disclosures	Content SBD analysis	Board committee's disclosure relate positively with SBD.
Orazalin. (2019)	Kazakhstan banking system 38 banks	2010-2016	Board size, board independence and female directors	Content SBD analysis	The study finds that female directors have a positive impact on SBD, while board size and board independence have no significant impact on SBD.
Gangi et al. (2019)	35 countries *142 banks*	2011-2015	Board size, board independence, female directors and CEO duality	Environmental SBD score	Document positive impact of effective CG mechanisms on environmental SBD.
Bukair & Rahman. (2015)	Gulf Cooperation Council countries 53 banks	2008	Board size, CEO duality and board independence	Content SBD analysis	They report that board size and CEO duality have no impact on SBD. On the contrary, they document a negative link for board independence-SBD nexus
Das et al. (2015)	Bangladesh banking systems *29 banks*	2007-2011	Board size and board independence	Content SBD analysis	They find a positive link between board size, board independence and SBD.
Jizi et al. (2014)	US banking industry *193 banks*	2009-2011	Board independence, board size, CEO duality	Content SBD analysis	Establish a positive relationship board independence, board size and SBD, but document a negative CEO duality-SBD link.
Sharif & Rashid. (2014)	Pakistan banking systems *22 banks*	2005-2010	Board independence, foreign nationals on board bank size	Content SBD analysis	Find a positive link among board independence, foreign nationals and bank size, and SBD.

Khan. (2010)	Bangladesh banking systems 30 *banks*	2007-2008	Non-executive directors, gender diversity and foreign nationals	Content SBD analysis	Documents a positive link between board independence, foreign nationals and SBD, but insignificant for female directors and SBD.
Barako & Brown. (2008)	Kenyan banking system *40 banks*	2006-2007	Female directors, board independence and foreign nationals	Content SBD analysis	Report that gender and board independence have positive effect on Social SBD, while foreign nationals-Social SBD disclosure link is insignificant.

Source: Compiled by the author (2020)

3.2.2.2 Sustainable banking and performance (sustainability-for-performance sensitivity)

Internal governance structures and sustainability have been subjected to evolutionary debate over the past 20 years. In particular, several theoretical perspectives have been adopted by previous researchers to examine the relationship between sustainable banking and financial performance of banks. Agency theory (AT) argues that managers may employ charity approach to gain endorsement from local business leaders (Galaskiewicz, 1985), which may not serve in the interest of shareholders and the society. Such activities may generate lower profits.

Resource-based view (RBV) posits that specialized skills and capabilities linked to SBD can lead to bank-specific economic benefits (McWilliams & Siegel, 2011), which can enhance FP. RBV perspective asserts that, SBD can be justified as key investment in capabilities that differentiate a bank from its competitors (Frynas et al., 2016). Such capabilities may include reputation for sustainability champion (Lourenco et al. 2014), green innovations (Chen et al., 2006), reduction in environmental risks and capitalization of environmental opportunities that generate long term shareholder value (Gangi et al., 2019). For example, consistent with the RBV (e.g., Gangi et al., 2019), the adoption of green strategies helps banks to address restrictions prescribed by the natural environment. It also contributes to the generation of sustainable, non-replicable, or unparalleled competitive edge (Elijido-Ten & Clarkson, 2017). Such activities may enhance FP of banks.

Stakeholder theory (SHT) is the underlying foundation, which states that SBD enhances FP (Freeman, 1984). It posits that, for banks to achieve the goal of maximizing shareholder wealth, managers should be mindful and pay attention to the diverse interests and well-being of all the stakeholders who can assist or hinder the achievement of this goal (Philips et al., 2003). It suggests that, the FP of banks largely depends on the enduring relationship with stakeholders. Hence, managing the stakeholders is a key tool for FP (Hammann et al., 2009). Accordingly, banks engage in SBD as a form of establishing trusting, cooperative and goodwill relationships with stakeholders (Jizi et al., 2014; Kolk & Pinkse, 2010).

Banks with good SBD can generate valuable goodwill, which can protect banks from unexpected issues and open doors to new businesses (Platonova et al., 2018), thereby enhancing FP. It further contends that SBD promote banks' image and enhances their reputation. Socially responsible banks therefore experience greater brand loyalty (Jizi et al., 2014), and customer satisfaction. This explanation is well grounded in SHT. Within this same framework, employee responsive banks benefit in terms of employee commitment. This can enhance FP because in such banks the tendency for labour related challenges such as labour disputes and work stoppages (strikes and lockouts) is reduced (Waddock & Graves, 1997).

Resource dependence theory (RDT) framework considers SBD as key investments that can influence the flow of critical resources to the banks (e.g., knowledge, deposit, contracts). Banks that invest in local developmental initiatives such as health may attract and win businesses within the locality. Thus, it suggests that banks in developing economies such as ESSA can consider SBPs as intangible assets that can result in a more efficient utilization of resources, which can enhance the FP of banks (Surroca et al., 2010).

Neo-institutional theory (NIT) suggests that engaging in SBD can help to improve bank legitimacy by enhancing the banks' image. It requires banks to be responsive to the ethical or moral environment where they operate (Andania & Yadnya, 2020). This can lead to economic efficiency in the form of gaining access to key resources, such as finance by securing the support of different powerful stakeholders which can enhance FP (Haque & Ntim, 2020).

Traditionally, scholars are of the view that the one and only SBD of a business is to use its resources and engage in activities designed to increase shareholder value (Henderson, 2007; Lantos, 2001; Friedman 1970). The implication is that banks are established to maximise the profit of shareholders and as such SBD investments undermine this objective (Friedman, 1970).

Accordingly, opponents of SBD investments explain that the adoption of socially responsible initiatives by banks lead to additional costs which create competitive disadvantage (e.g., Simpson & Kohers, 2002; Preston & O'Bannon, 1997; Aupperle et al., 1985; Friedman 1970). They suggest that being socially and sustainability active through engaging in community projects, supporting employee welfare and minimizing environmental damage can be expensive (Barnett & Salomon, 2006). Therefore, SBD investments can be a huge source of administrative burden to banks (Barnett & Salomon 2006), with negative impact on FP. Indeed, Preston and O'Bannon (1997) argue that the higher the performance of banks' SBD

investments, the lower their FP. Accordingly, sustainable responsible banks tend to have less advantage compared to average banks (Platonova et al., 2018).

Likewise, other researchers advocate that resources dedicated to SBD or actions should be diverted or either spent on banks' efficiency or returned to shareholders' (e.g., Perrini et al., 2011; Lantos 2001). The basis of their argument is that it is not the responsibility of banks to address SBD issues (Perrini et al. 2011). To that effect, they rationalize that SBD investment is associated with lower economic efficiency and profit because it imposes unequal cost among banks and places responsibility on banks rather than government (e.g., Jensen, 2001; Lantos 2001; Friedman 1970). In this regard, they suggest that SBD issues should be matters of concern to the government and hence should be addressed by the government or a third sector (Platonova et al., 2018).

In addition, others assert that SBD investments should not be factored into banks' core operations (e.g., Jensen, 2001; Friedman, 1970). They justify their claim by underscoring the potential adverse effect of excessive role diversification in banking. For instance, they classify SBD policies as external interference, over-regulation and legislation (Friedman, 1970). Thus, SBD investments denote corporate irresponsibility, misguided virtues, unethical and misappropriation or unjustified appropriation of shareholders' funds, which amount to theft and violation of shareholders' rights (e.g., Lantos, 2001; Friedman, 1970). In particular, Jensen (2001) argues that SBD issues can lead to a situation where senior managers will be confronted with multiple goals with no clear objectives. These can negatively impact on FP. Therefore, integrating SBD policies in business can create an obstacle to banks' competition for survival (Platonova et al., 2018). Accordingly, banks are advised to focus on 'making profit' which is the overriding goal and responsibility of bank senior managers (Ofori et al., 2014).

However, in line with the theoretical arguments, recent fast-developing banking literature and global institutions have rejected the notion that banks should channel all their efforts and resources to maximization of shareholder value (e.g., Platonova et al., 2018; Ofori et al., 2014). In particular, the interdependence of banks and society has been recognized as a key relationship (Platonova et al., 2018). For example, the UN Global Compact (2020) suggests that banks need to adopt and articulate a clear purpose beyond profit maximization to attract investors, highly skilled employees and loyal customers (UN Global Compact, 2020). Indeed, the days of shareholder return as the sole business objective are over (UN Global Compact, 2020). Therefore, managers of banks have an obligation to take action to protect and improve both the welfare of society and the interest of their banks (Ofori et al., 2014). For example, the

risk that climate change will have a substantial and long-term detrimental impact on the growth and prosperity is a factor that banks need to acknowledge.

Conversely, banks should also be committed to respecting human rights which applies equally to employees, customers, suppliers and business partners. Besides, ensuring a safe and productive banking environment is one of the fundamental responsibilities of banks. For example, concerning health and safety disclosures, the ongoing spread of the new coronavirus has become one of the biggest threats to the global economy and financial markets including banks (Olimov & Khotamov, 2020). Nicola et al. (2020) stress the need for banks to pay equal attention to global health and safety issues by indicating that COVID-19 has affected communities, firms and organizations globally, inadvertently affecting the banking system.

Seemingly, this suggests that banks have other equally important SBD aside from shareholder value maximization. These additional activities are contained in several SBD models propounded by researchers that seek to capture the various responsibilities of banks (Ofori et al., 2014). Perrini et al. (2011) suggest that in responding to the paradigm shift, there are attempts to include different SBD practices on the agendas of an increasing number of banks in various parts of the world and the adoption of value-based governance in meeting the interests of primary and secondary stakeholders. For example, banks have in recent years begun to incorporate SBD within their organizational and operational strategies (Platonova et al., 2018).

The empirical evidence has produced mixed findings (see Table 3.2). From the developed market, Cornett et al. (2014) examine the effect of SBD on FP of 190 banks in US. They find that, SBD does not appear to affect FP (ROA and ROE) for all the smallest size banks. However, they find that for the largest banks, SBD positively relate to FP. In an international sample of 22 countries, Wu et al. (2013) explore the same link in a sample of 162 banks from 2003 to 2009. They report that SBD has positive effect on all the two FP measures (ROA and ROE).

From developing economies, Mukhibad et al. (2020) examine the influence of SBD on FP of banks in a sample of 12 Islamic banks in Indonesia over the period 2012-2018. They show that SBD has no impact on ROA, ROE and net profit margin. Buallay et al. (2020) investigate the same link in 18 MENA countries based on a sample of 59 banks. The findings of the empirical results demonstrate that SBD has positive impact on Tobin's Q, ROA and ROE. However, they find evidence that suggests that social SBD has a negative effect on Tobin's Q, ROA and ROE. Szegedi et al. (2020) also in a sample of 20 banks in Pakistan from 2008 to 2018 report that SBD has positive effect on FP (ROA and ROE). Similarly, Maqbool and

Zameer (2018) examine the same link in a sample of 28 banks in India from 2007-2016. The results show SBD positively impacts on FP (ROA, ROE and stock returns). Platonova et al. (2018) sample 24 banks in 5 Gulf Cooperation Council countries and report a positive relationship between the SBD and ROA. The results of the study show no statistically significant relationship between all the individual dimensions of SBD and ROA.

In ESSA context, Bolanle et al. (2012) in a sample of 1 bank (First Bank Plc) in Nigeria provide evidence of a positive relationship between SBD expenditure and FP measured by profit after tax from 2001-2010. They suggest since SBD investments is tax deductible, banks can reduce their tax burden by engaging in SBD investments which impact positively on FP. Similarly, in another single country analysis, Ofori et al. (2014) employed a survey SBD measure. The authors document a positive link between SBD and FP measures (ROA and ROE) in the Ghanaian banking system in 2009. Finally, Siueia et al. (2019) analyze the same relationship in a sample of 10 banks in two countries in Africa, South Africa and Mozambique over the period 2012-2016. They establish a positive relationship between SBD and ROA.

Based on the arguments of the multi-dimensional framework, which suggest a positive SBD-FP nexus and prior studies that also document positive link between SBD and FP, it is expected that SBD will positively affect FP of banks in the region. Therefore, the study proposes the following hypothesis as illustrated in Fig 3.5 (*H5*):

H5a: There is a positive association between sustainable banking as measured by SBD and financial performance (FP) in ESSA banks.

Taking into consideration the outcomes of previous studies, it is important to highlight the multi-dimensional nature of SBD and the need to disaggregate it into sub-dimensions to gain an improved understanding of the relationship. Therefore, it is expected that the individual dimension variables of SBD, namely ENV, SOC, HAS, EHR, CIV and EMP will positively affect the FP of banks in the region as discussed above. As a result, the following sub-hypotheses are developed:

H5b: There is a positive association between environmental dimension of SBD and the FP of banks in ESSA.

H5c: The social dimension of SBD has a positively associated with FP of banks in ESSA.

H5d: Health and safety dimension of SBD is positively associated with FP of banks in ESSA.

H5e: Ethics and human rights dimension of SBD is positively associated with FP of banks in ESSA.

H5f: There is a positive association between community involvement dimension of SBD and the FP of banks in ESSA.

H5g: The employee dimension of SBD is positively associated with FP of banks in ESSA.

Table 3.2: Summary of prior banking studies on SBD-FP nexus

Publications	Employed data	Period of study	CSRD measure	FP measures	Findings and conclusions
Mukhibad et al. (2020)	Indonesia banking system *12 banks*	2012-2018	Content SBD analysis	ROA, ROE and Net profit margin	They find that SBD has insignificant relationship with ROA, ROE and Net profit margin
Buallay et al. (2020)	18 MENA countries 59 banks	2008-2017	EIRIS ESG	ROA, ROE and Tobin's Q	The report positive effect of SBD on ROA, ROE and Tobin's Q. However, social factors were negatively linked with all the FP measures.
Szegedi et al. (2020)	Pakistan banking system *20 banks*	2008-2018	Content SBD	ROA and ROE	They find positive link between CSD and FP (ROA and ROE)
Mangantar (2019)	Indonesia banking system *5 banks*	2012-2016	Content SBD analysis	ROA	The study finds no significant relationship between SBD and ROA. However, social disclosure has positive impact on ROA.
Siueia et al. (2019)	South Africa and Mozambique banking systems *10 banks*	2012-2016	Content SBD analysis	ROA and ROE	The study finds positive relationship between SBD and the two FP measures; ROA and ROE
Platonova et al. (2018)	5 Gulf Cooperation Council *24 banks*	2000-2014	Content SBD analysis	ROA and ROE	The study documents a positive link between SBD ROA. The results find no significant link between the individual dimensions of SBD and ROA.
Maqbool & Zameer (2018)	Indian banking system *28 banks*	2007-2016	Content SBD analysis	ROA, ROE, stock market return	The study documents a positive link SBD and the FP measures (ROA, ROE and stock market returns)
Cornett et al. (2014)	US banking system *277 banks*	2003-2011	MSCI ESG Stats	ROA and ROE	They document insignificant relationship between SBD and FP (ROA and ROE) in small banks but report positive link between SBD and FP (ROA and ROE) in large banks.
Ofori, et al. (2014)	Ghanaian banking system *22 banks*	2009	Questionnaire survey SBD method	ROA and ROE	Document a positive impact SBD on the two FP measures (ROA and ROE)
Wu et al. (2013)	22 countries *162 banks*	2003-2009	Reputation SBD index (REIRIS database)	NII, ROA and ROE	They report that SBD has positive effect on all the three FP measures (NII, ROA and ROE)
Bolanle et al. (2012)	Nigerian banking system *1 bank*	2001-2010	SBD expenditure	Profit after tax	They establish a positive relationship between SBD and FP

Sources: Compiled by the author (2020)

3.2.2.3 The moderating effect of CGI on the sustainability-for-performance sensitivity

It has been suggested that banks that engage in greater SBD can perform better financially than their counterparts that engage in less SBD projects in several ways. In theory (AT, SHT and RDT), it has been claimed that engaging in SBD can improve FP (Jensen & Meckling, 1976). This is mainly achieved through a reduction in managerial opportunism as a results of quality flow of information between managers and shareholders (Suchman, 1995; Pfeffer & Salancik, 1978; Jensen & Meckling, 1976). Crucially, others suggest that engaging in increased SBD may not only help enhance FP by legitimising the activities and operations of banks, but also provide opportunities to obtain key corporate assets (UN Global Compact, 2020; Ntim, 2016; Suchman, 1995). For example, SBD builds brand loyalty (UN Global Compact, 2020), enhances banks' image, goodwill and reputation (Suchman, 1995; Pfeffer & Salancik, 1978). Additionally, banks that disclose authentic narrative on creating societal values especially how that link to employees' values can attract and retain highly skilled staff (UN Global Compact, 2020).

Moreover, other scholars propose that addressing the needs of powerful stakeholders (e.g., trade unions, customers, politicians, and local communities) through increased commitment to SBD can improve corporate legitimacy and FP (Ntim, 2016; Ntim & Soobaroyen, 2013; Donaldson & Preston, 1995). They argue that such disclosures minimise potential costs related to politics (e.g., nationalisation threats, legislation, labour frictions, uprisings by local communities and customer boycotts) (Donaldson & Preston, 1995; Freeman, 1984).

In practice, there is significant evidence that shows that quality CG structures can positively impact on the FP of banks (e.g., Musa, 2020; Otieno, 2012; Uwuigbe, 2011). Considering that the choice for banks to engage in increased SBD originates from the board of banks, the study proposes that internal governance structures may have a moderating effect on sustainability-for-performance sensitivity (SPS). Also, evolving theoretical and empirical insights suggest even though both effective CG and SBD are valued by the stock markets, but CG disclosures are valued much greater than SBD (e.g., Ntim, 2016; Ntim & Soobaroyen, 2013). The implication is that, the potential positive impact of SBD on FP may be as the results of the positive effect of CG mechanisms on FP, and hence the increase in FP is mainly driven by CG disclosures rather than SBD.

More importantly, prior literature offers one important channel by which CG disclosure may heighten the SPS. Meanwhile, some scholars argue that, internal governance structures can be assumed as strong pillar, dimension and/or complement to SBD (e.g., Ntim, 2016; Ntim & Soobaroyen, 2013; Jamali et al., 2008). The implication is that, SBD can be theorized as an

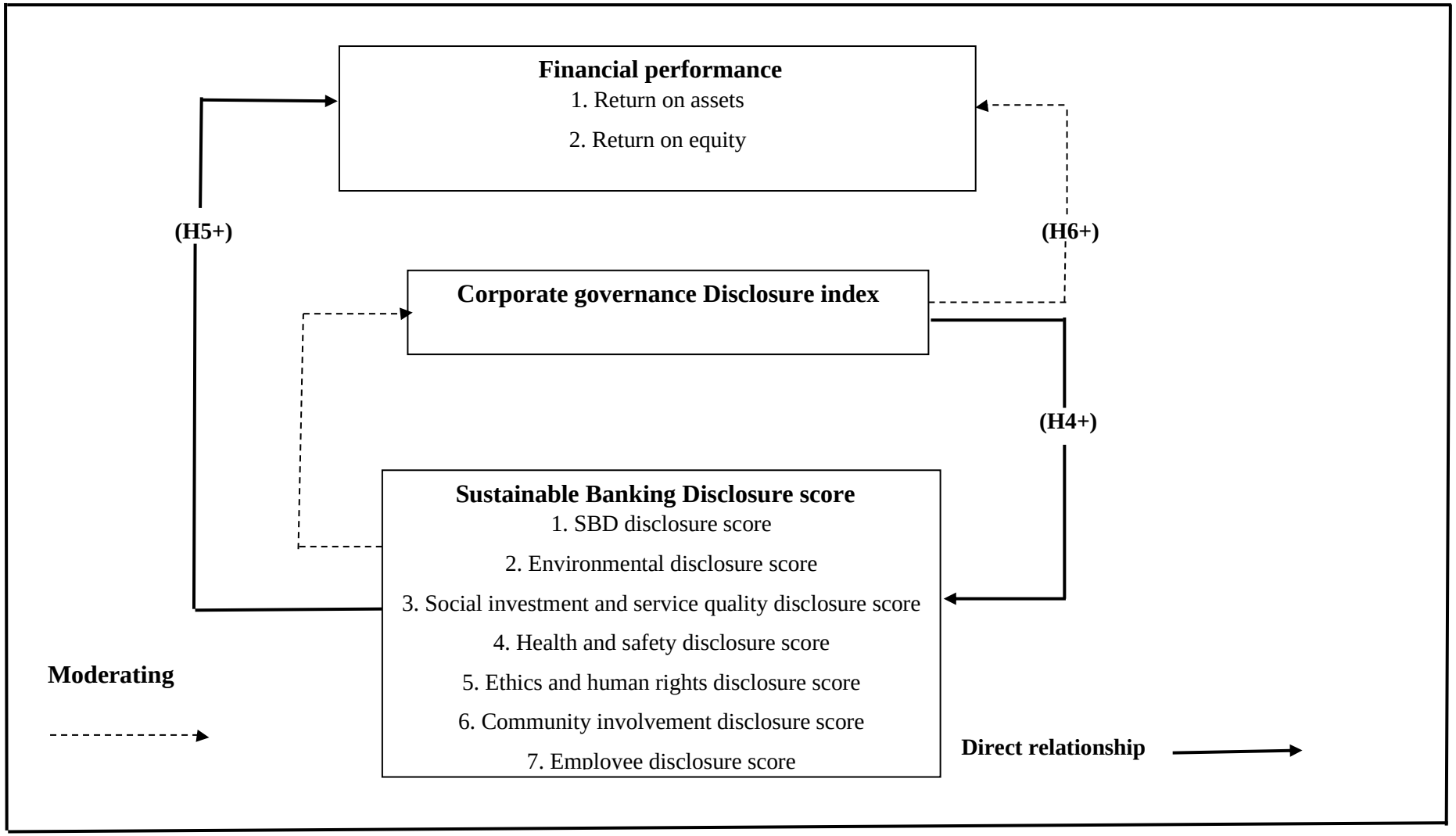
extension of quality of internal corporate governance structures. This infers that in well-governed banks (i.e., banks with high levels of CG disclosures), senior managers may seek to increase their SBD investments as a critical means of minimizing conflicts with stakeholders (Ntim & Soobaroyen, 2013; Jo & Harjoto, 2012). In this case, SBD will have a beneficial impact on FP due to the decline in conflicts of interests with the diverse stakeholders through effective internal governance structures (Ntim & Soobaroyen, 2013).

Alternatively, in banks that are poorly governed (i.e., banks exhibiting low degree of accountability, transparency, corruption, fraud, and managerial violation), less SBD investments are likely to be implemented, which can aggravate conflicts among the bank's broader stakeholders (Ntim, 2016; Ntim & Soobaroyen, 2013; Harjoto & Jo, 2012, 2011). This can lead to frequent labour strikes, customer boycotts, and increased regulator or government intervention (Ntim & Soobaroyen, 2013). Hence, not engaging in SBD can have a negative impact on FP of banks through increased conflict of interests, emanating from ineffective or weak CG mechanism (Ntim & Soobaroyen, 2013).

Nevertheless, prior banking studies have investigated the direct impact of sustainable banking on financial performance (e.g., Mukhibad et al., 2020; Buallay et al., 2020; Siueia et al., 2019), without exploring the probable moderating impact of CG disclosures on the sustainability-for-performance sensitivity. Consequently, the objective is to contribute to the international corporate governance, sustainable banking and financial performance banking literature by exploring the sustainability-for-performance sensitivity and ascertains whether CGI can positively moderate the sustainability-for-performance sensitivity as highlighted in Fig 3.5 (*H6*). Therefore, the next hypothesis to be investigated is:

H6: Corporate governance disclosure index positively moderates the sustainability-for-performance sensitivity (SPS) of the ESSA banks, with the sustainability-for-performance sensitivity being stronger in banks with high corporate governance disclosure index score.

Fig 3.5: Conceptual framework of hypotheses development for the sustainability-for-performance sensitivity



3.2.3 Empirical evidence on the association among board attributes, ownership structures, competition and BRT

This section reviews banking literature on board attributes, ownership structures, competition and BRT. In reviewing the empirical literature, the theoretical framework discussed in section 3.1 will be totally integrated into the fundamental arguments. First, the study will focus on the association between board attributes and BRT. Next, it will discuss the association between ownership structures and BRT. Finally, the section will focus on empirical studies on the impact of competition on BRT.

3.2.3.1 Board independent financial expert and bank risk-taking

Board member financial acumen is crucial in highly regulated financial sectors, such as banking (Apergis, 2019). Theoretically, AT suggests that independent directors who have financial expertise (EXPERT) have higher monitoring capacity to limit managerial opportunism and BRT (Jensen & Meckling, 1976). This argument is based on the notion that, EXPERT possess superior oversight leading them to help reduce agency conflicts, thereby protecting shareholders (Minton et al., 2014). From SHT perspective, EXPERT on the board of banks might increase the monitoring role of the board by offering a superior presentation of stakeholders' interests (Solomon, 2010; Ozkan, 2007). Similarly, RDT considers EXPERT as key internal governance mechanism that can help attract critical resources to the bank as appreciable knowledge of banking can lead to effective monitoring and oversight of BRT (Wang & Zhu, 2015). For that purpose, RDT specifies that independent directors should be composed of enough EXPERT with specialized skills and expertise commensurate with the risk profile of banks (Apergis, 2019).

In practice, prior studies suggest that EXPERT tend to adopt a more conservative approach in making essential corporate decisions such as BRT (e.g., Apergis, 2019; Harris & Raviv, 2006). In particular, Harris and Raviv (2006) argue that EXPERT have lesser outlays in obtaining information about the details and the inherent risks associated with banking transactions. In this regard, they can mitigate any inefficiencies in monitoring managers' BRT behaviour. Arguably, an appreciable knowledge of banking can lead to better oversight and more efficient BRT behaviour because substantial proportion of BRT is driven by operations and economic conditions unique to the sector (Wang & Zhu, 2015; Minton et al., 2014). Moreover, scholars posit that, banks with more EXPERT can benefit from their expertise in

terms of early spotting of risk and preferring of risk mitigating solutions (e.g., Apergis, 2019; Minton et al., 2014).

Empirically, studies analyzing the influence of EXPERT on BRT are generally uncommon. This provides avenue to make contribution to the growing body of banking literature exploring this link. For instance, Garcia-Sanchez et al. (2017) document that EXPERT on the board is associated with less BRT. Their evidence was based on an international sample of 159 banks from 2004 to 2010. Crucially, the effect of EXPERT on BRT has not been explored in the ESSA banking context. However, based on the above arguments, EXPERT in the region may be beneficial in terms of curbing excessive BRT. Therefore, the first hypothesis to be tested is that:

H7: Board independent directors who are financial experts will curb bank risk-taking behaviour in the ESSA region.

3.2.3.2 Board meetings and bank risk-taking

Board meeting is considered to be a key attribute that may influence the effectiveness of corporate board (Vafeas, 1999). Within the theoretical framework, AT predicts that without effective monitoring by the board, managers will behave in ways inconsistent with the interests of the shareholders. In this case, the board is expected to monitor BRT to ensure is consistent with shareholders' risk preferences. Discernably, one key dimension of board oversight is the intensity of board activity, which encompasses number of meetings by the board (Brick & Chidambaran, 2010). Accordingly, AT recommends that the board of banks should meet regularly in order to align the interest of shareholders and managers. Within SHT framework, regular board meetings will lead to alignment of the risk preferences of stakeholders and managers which can influence BRT.

Moreover, evidence of prior research suggests that, regular board meetings offer directors the platform to deliberate on key BRT decisions (see Younas et al., 2019; Dong et al., 2017). This has the potential of resolving agency conflicts because of a greater information flow within the board resulting in apparently fewer extreme decisions (Younas et al., 2019). For example, overconfident managers may pursue bank policies that can be excessively risky or value destroying (e.g., Jiang et al., 2015). Such unhealthy BRT may not serve the interest of shareholders; however, this can be limited by effectively monitoring managers through frequent board meetings (Younas et al., 2019). Similarly, past evidence observes that a board

that meets more often can respond and address key banking issues such as investment decisions, thereby influencing BRT.

The empirical findings are consistent with the theoretical framework of AT that NBMs can increase board effectiveness, which can help the board to curb excessive BRT (see Battaglia & Gallo, 2017; Dong et al., 2017; Liang et al., 2013; Ayadi & Boujèlbène, 2012). For instance, Liang et al. (2013) in a sample 50 Chines banks from 2003 to 2010 document that the NBMs improve the quality of loan portfolio. They conclude that, banks with increased monitoring through frequent board meetings exhibit lower loan default and less BRT. Likewise, Dong et al. (2017) find that NBMs reduce BRT in the Chinese banking system. Their sample contained 105 commercial banks in China from 2003 to 2011. Battaglia and Gallo (2017) also examine the link between NBMs and BRT in Europe from 2006 to 2010. Based on a sample of 40 banks in Europe, they establish a negative relationship between NBMs and BRT. Ayadi, and Boujèlbène (2012) document a negative link between the NBMs and BRT in 30 European banks over the period of 2004-2009.

With reference to ESSA banks, studies examining the influence of NBMs on BRT are sparse, and hence, this research establishes a timely contribution to the existing banking studies. Notably, the Combined CG Code issued in the ESSA countries recommend that the board of the banks should meet regularly to deliberate on key corporate decisions including BRT. Again, the expectation of the Combined CG Code is that when the board of banks have regular meetings, the monitoring role of the board will increase which in turn can limit excessive BRT. Given the weak institutional framework in the region, it is expected that frequent board meetings can limit managers from engaging in excessive BRT. Hence, the second hypothesis to be tested is:

H8: An increase in the number of board meetings will curb risk-taking behaviour in the ESSA regions' banking system.

3.2.3.3 Institutional ownership and bank risk-taking

Agency theory (AT) suggests that institutional shareholders are influential stakeholders who tend to have additional motivation in terms of monitoring of opportunistic behaviour of senior managers (Ntim et al., 2019). In ESSA region, institutional investors have large equity stakes in the banking system (Andrianova et al., 2008). Prominently, these institutional owners have some advantages over individual or less informed shareholders (Elmagrhi et al., 2020). Such advantages include easy access to information, knowledge, skills and greater external networks

(Ntim et al., 2015). These resources empower them to exert greater effect on key decisions of the board including BRT (Elmagrhi et al., 2020).

AT argues that institutional shareholders have a much greater motivation to monitor senior managers to safeguard their investment (Albassam, 2014). This is particularly important in banking industry where exit may be costly to institutional investors (Albassam, 2014). In this case, institutional owners can limit agency problems by imposing their risk preferences on managers. This can help in aligning managers and shareholders' risk preferences, thereby preventing excessive BRT. In addition, SHT contends that institutional shareholders may monitor banks to ensure BRT is aligned with the various stakeholders and not only shareholders. Due to their considerable investment in banks, institutional stockholders tend to be actively involved in the internal governance structures of banks in which they hold significant stake (Diez-Esteban et al., 2016). For example, Boubakri et al. (2013), and Wang and Xiao (2011) maintain that, when institutional investor's stakes increase, there is the tendency for them to join forces with management to safeguard their investments and this may curtail excessive BRT.

By contrast, other scholars argue that institutional investors, may have detrimental effect on BRT. They maintain that because institutional investors are assumed to be diversified investors, they are largely driven by profitability of their investments regardless of the level of control and as such, a lot of institutional investors tend to have high risk attitude (Diez-Esteban et al., 2016). Therefore, it has been suggested that, when banks are controlled by institutional investors, BRT can usually reach higher levels (Diez-Esteban et al., 2016).

In line with the above opinion, other scholars classify institutional investors as a group of investors who are driven by short-term returns and will not support long-term value creation (e.g., Hutchinson et al., 2015; Almazan et al., 2005). Particularly, in banking, transient institutional investors are often myopic investors who tend to focus on short-term, hence lack incentives to incur monitoring costs (Chou & Lin, 2011). For instance, Almazan et al. (2005) suggest that, such short-term investments are mostly risk-prone, and this attitude of institutional investors can encourage managers to undertake riskier investments to increase shareholder returns. Moreover, Pound (1988) asserts that institutional shareholders can be considered as controlling owners who are able to exploit the resources of banks to finance their own projects. For instance, Diez-Esteban et al. (2016) suggest that, by encouraging excessive BRT, institutional shareholders can largely be blamed for the collapse of many banks in Southern

European countries. These arguments tend to suggest that, powerful institutional shareholders may be associated with high BRT.

Concerning institutional ownership, the empirical evidence is mixed. For example, Garcia'Marco and Robles'Fernandez (2008) investigate the effect of ownership structures on BRT in Spanish banking sector for the period 1993-2000 in a sample of 258 banks. They observe that institutional bank owners decrease the risk-taking of banks in Spain. Similarly, Knopf and Teall (1996) document that institutional ownership is beneficial as they find an inverse link between institutional ownership and BRT in a sample of 2082 banks in the US from 1986 to 1992. Similarly, Ellul and Yerramilli (2013) investigation in the US reveal that, banks in the US with substantial institutional investors tend to be cautious in their risk-taking. Their evidence is based on a sample of 100 US banks from 1995 to 2010.

Alternatively, other prior literature also finds a linear link between institutional ownership and BRT. Barry et al. (2011) establish that institutional ownership increases BRT in 17 countries in Europe. They sampled 1791 banks from 1998 to 2011. Similarly, Ehsan and Javid (2018) find that institutional ownership increases BRT in the banking system in Pakistan. Their analysis was based on sample of 26 banks from 2000 to 2014. Further, Chou and Lin (2011) provide support of a positive link in Taiwan. They document a positive connection between institutional ownership and BRT in a sample made up of 37 banks in the country. The analysis covered the period from 2001 to 2006.

The regional governance reforms in ESSA are reinforced with prospect that institutional stockholders could possibly play a vital role in augmenting CG mechanisms, including limiting excessive BRT. However, studies on the link between institutional ownership and BRT in ESSA region are generally rare. This provides a fertile area for further studies. Notably, institutional stockholders such as public pension funds, mutual funds and insurance corporations are the major players in the ESSA banking system accounting for about 75% stakes in banks (Andrianova et al., 2008). It can be argued that, such institutional investors with significant voting power can influence BRT through their voting rights by imposing their low risk preference on managers which might reduce BRT. The study therefore expects institutional ownership to be related with less BRT in the region, hence the study investigates the hypothesis below:

H9: Institutional ownership is negatively associated with bank risk-taking behaviour in ESSA region.

3.2.3.4 Government ownership and bank risk-taking

AT argues that agency conflicts may intensify with influential owners such as government (Albassam, 2014). From SHT perspective, government ownership may be a key factor influencing BRT, especially in developing countries (Dinc, 2005). Based on RDT perspective, government ownership may offer banks with financial and non-financial resources (Boubakri et al., 2019). Financial resources that banks with government as shareholder may receive include access to government related contracts, tax credit, cheap deposits from governmental agencies and financing (Albassam, 2014). Examples of non-financial resources from the government may be in the form of implicit bailout guarantees when the bank is in distress as witnessed during the recent global financial crisis (e.g., Boubakri et al., 2019; Albassam, 2014).

Crucially, the influence of government ownership in the banking system can be discussed in two main ways: development and political views. Pioneered by Gerschenkron (1962), the development view suggests that government ownership in banks has two key motives. These are financial development and economic motives. The researcher contends that, these motives totally differ from that of commercial banks operating in the country. In this case, government ownership is costly as it delivers the opportunity for the government to use its influence to compel the bank to finance projects of the government (Boubakri et al., 2019). Evidently, such projects may be finance regardless of the associated risk and return (Boubakri et al., 2019). This view suggests that, in banks where governments have substantial ownership, senior managers may work as agents of government and may have the incentive of engaging in excessive BRT (Eshan & Javid, 2018).

The political view which was developed by Shleifer and Vishny (1994) posits that government holding in banks provides the platform for governments to allocate resources for their political gains. Political motives related challenges with government holding vary from one country to the other. However, notable among these challenges from developing countries perspective are offering of employment and financing (Shleifer & Vishny, 1994). Others include granting of incentives to favour politically connected interest groups for the purpose of votes and funding of political parties especially the ruling party (Shleifer & Vishny, 1994). In particular, Ismiyanti et al. (2018) suggest that government ownership is generally employed for political purposes. Examples include granting of low-interest loans to businesses that are pro-government. Such firms are rewarded by politicians for offering them support to stay in power or in return for supporting their political strategy. For example, government owned

banks in the ESSA region have the tendency to grant credit facility for projects that may have high social returns but with very low profit returns.

Additionally, when state owned bank or in a bank where government has substantial stakes fails, the government will bail out the bank to avoid embarrassment. Such government protection becomes a form of insurance, which creates moral hazard problems through decreased market discipline (Ismiyanti et al., 2018). In this regard, there is an implied endorsement and shield of the bank's risky projects by government (Al-Khouri, 2012). The moral hazard view indicates that as government holdings increases in the banking system, risk-taking also increases (Boubakri et al., 2019).

Previous studies confirm that government ownership in banks is associated with excessive BRT. For example, Iannottaa et al. (2007) observe that government holdings in banks reduces the quality of loan portfolio and high BRT in 15 European countries. Their evidence is based on a sample of 181 banks from 1999 to 2004. Further, Iannotta et al. (2013) report that government ownership induces high BRT in a sample of 210 banks in 16 European countries. They sampled the banks from 2000 to 2009. In developing countries, Micco et al. (2007) establish that government ownership in banks is linked with high BRT. They document this finding based on an international sample of 6677 banks in 179 countries. The sample period starts in 1995 and ends in 2002. Of direct relevance to this study, Lassoued et al. (2016) in a sample of 171 banks from MENA (Middle East and North Africa) area during the 2006-2012 period find that government ownership incentivizes banks to engage in excessive BRT. Similarly, Cornett et al. (2010) also examine banks from 16 Asian countries. Their sample period starts in 1989 and ends in 2004. They observe that government holdings in banks exposed the banks to much higher credit risk than banks that are privately-owned in the countries.

Alternatively, others maintain that if governments attach much importance to social and political objectives with the aim of achieving political stability and employment, then banks with government ownership should pursue less risky investments to reduce the uncertainty of earnings (Boubakri et al., 2013; Al-Khouri 2012). They contend that; directors appointed by the government may pressure the banks to desist from engaging in risky investments. Under such circumstance, government ownership may lead to less BRT. Likewise, Denis & McConnell (2003) and John et al. (2008) claim that, government holding is usually linked with lower bank value which is as the results of less risky investment policies.

Empirically, Al-Khouri (2012), Iannotta et al. (2013) and Chan et al. (2016) have reported negative findings for samples of Gulf Cooperative Council, European and Chinese banks respectively. For example, Iannotta et al. (2013) report that, government holding is related with low loan default risk in a sample of 210 banks in 16 European countries over the period 2000-2009. Chan et al. (2016) also document that government ownership contribute to lower BRT in the Chinese banking industry based on 16 banks from 2003 to 2011.

As has been discussed in section two, the privatization of state banks to private investors has dominated the banking reforms in the region. Nevertheless, national governments still have substantial ownership in several banks in ESSA countries (Bokpin, 2016). Hence, the focus on government ownership. Due to the weak institutional framework in the region, government owned banks may grant credit facility with no economic basis to highly risky sectors of the economy such as agriculture sector. They may offer credit or seldom coerced into making economically questionable credit to friends and relatives of politicians (Boubakri et al., 2019; Mohsni & Otchere, 2014). Accordingly, the study expects ownership of government to increase BRT behaviour owing to the use of banks by politicians to follow their political objectives that can lead managers to high-risky investments (Boubakri et al., 2019). The next hypothesis is as follows:

H10: A positive association exists between government ownership and bank risk-taking behaviour in the ESSA region.

3.2.3.5. Foreign ownership and bank risk-taking

Theoretically, AT theory suggests that the prime origin of conflict between owners of banks and senior managers emanates from their diverse opinion of risk (Lassoued et al., 2016). Shareholders due to their diversified portfolios tend to encourage excessive BRT for a higher projected profit. However, senior managers are conservative in view of safeguarding their positions and individual benefits, and maintaining their attained human capital (Lassoued et al., 2016; Jensen & Meckling, 1976). From RDT, the entry of foreign investors into the domestic market could potentially allow the flow of essential resources into the domestic bank (Lassoued et al., 2016). These critical resources may include better human capital, technology, and knowledge transfer (Lassoued et al., 2016).

Concerning the impact of foreign banks on BRT, it has been suggested that foreign banks may experience liabilities of foreignness due to the inherent problems in knowing and orienting themselves with the domestic country's' regulations and practices (Kobeissi & Sun, 2010).

This can lead to extra operating expenses and higher risks in the banking sector of host country (Haque, 2019). For example, foreign banks are largely considered as possessing a riskier credit portfolio due to proprietary information challenges (Chen et al., 2017). The argument is that, local banks may have proprietary information on the creditworthiness of borrowers; however, this may not be same with foreign banks. At least at the early stages of entry, foreign banks may incur high NPLs because they may be confronted with a pool of customers with poor credit history (Dell'Ariccia & Marquez, 2006). Additionally, there is the tendency for the subsidiaries to engage in excessive risk-taking in a form of moral hazards which can increase BRT (Boubakri et al., 2013).

Further, foreign banks may influence BRT in the host country directly through risk-shifting approach (Boubakri et al., 2013). This is mainly done through restructuring of incentives packages for managers (Jensen & Heckling, 1976). By offering attractive performance incentives to managers, foreign banks can increase the propensity for managers to take more risk. Arguably, the implementation of restructuring of banks by more risk oriented foreign investors can indirectly lead to a change in BRT profile of acquired banks. For example, John et al. (2008) posits that foreign ownership in banks are mainly related with greater bank value which is as a result of high risky investments.

On the empirical front, prior studies document a positive effect of foreign ownership on BRT. For example, using 1300 banks in 32 emerging economies from 2000 to 2013, the findings of Chen et al. (2017) reveal that, banks owned by foreign investors engage in more risk-taking than their local counterpart.

Alternatively, foreign ownership in banks can have several benefits which include foreign financing, better managerial skills and more innovative in terms of handling potential borrowers (Ismiyanti et al., 2018). For example, the "global advantage hypothesis" suggests that banks that are owned by foreigners may rely on more advanced technologies in their credit appraisal process (Lensink et al., 2008). Such banks may have as better screening technologies, highly skilled employees and improved corporate practices (Lensink et al., 2008). Arguably, such superior screening technologies can serve as powerful tools which can help reduce potential liabilities of foreignness as well as have better risk controls, which may lower BRT behaviour (Haque, 2019; Ismiyanti et al., 2018; Chen et al., 2017). Furthermore, it is possible that when foreign banks are entering a new market, they may either have precautionary approach to reduce risk or may enter through acquisition, and thus acquire credit portfolio that

contains information of borrowers in the domestic market (e.g., Haque, 2019; Delis et al., 2016). In addition, the ease of access to governance expertise by foreign banks can reduce monitoring cost, due to resource availability and previous experience which can reduce excessive BRT by managers (Dharwadkar et al., 2000).

Prior studies provide evidence that foreign ownership reduces BRT. For example, Haque (2019) report that banks owned by foreigners take less risk in the MENA region. Their evidence is based on 144 banks from 2001 to 2012. Similarly, Lassoued et al. (2016) also examine the same link with 171 banks in the MENA region covering the period of 2006-2012. They document that foreign ownership in banks in the region decrease BRT. Ehsan and Javid (2018) also observe an inverse link between foreign banks and BRT in 26 banks in Pakistan. The sample period of their study spans from 2000 to 2014. Boateng et al. (2019) reveal that foreign banks have fewer NPLs in China. Their evidence is based on 88 banks in China covering the period 2003-2014. Employing 6677 banks from 179 countries from 1995 to 2002, Yeyati and Micco (2007) observe a negative link between foreign ownership and BRT.

Within the ESSA region, the reforms in the banking system attracted a number of foreign banks into the region that was formerly controlled d by domestic banks. In in the region, foreign investors can be perceived as stimulators for BRT for several reasons. First, foreign banks in the region tend to exhibit higher predilection for risk as compared with local shareholders as they have superior diversification strategies (Lassoued et al., 2016). Second, foreign banks in the region are more resourceful and engage in high risky projects than local banks (Lassoued et al., 2016). Based on moral hazard hypothesis, a higher foreign holdings in banks in the region may be associated with greater BRT (Boubakri et al., 2019). This is because managers of such banks might have the chance to generate their own personal gains due to the absence or remote nature of monitoring by foreign owners (Lassoued et al., 2016).

Research examining the effect of foreign ownership on BRT in a cross- country sample is uncommon in ESSA and therefore, provides avenue to contribute to the extant banking studies. Nevertheless, prior research based on single country evidence in the region suggests that foreign ownership impact positively on BRT (e.g., Ozili, 2018; Bokpin, 2016). In line with the evidence of a few empirical studies in emerging economies, which suggest a positive link between foreign ownership and BRT, the next hypothesis to be investigated is structured as follows:

H11: Foreign ownership positively affects risk-taking behaviour in the ESSA banks.

3.2.3.6 Competition and bank risk-taking

The banking literature provides two contrasting opinions on the relationship between competition and BRT (see Cuestas et al., 2020). First, competition-fragility' view maintains that, BRT increases with high levels of competition. This is deeply rooted in franchise value hypothesis which suggests that, competition increases BRT because of its negative impact on franchise value (Keeley, 1990). Franchise value represents the present value (PV) of the future profits that a bank is projected to make as a going concern (Demsetz et al., 1996). Profits are earnings over all other costs such as the cost of capital (Arping, 2019; Demsetz et al., 1996).

Franchise value has two prime bases. Essentially, regulators (Central Banks) limit competition so as to offer banks access to profits. This franchise value that banks obtain due to these restrictions of competition imposed by national regulators is known as "market-related" (Demsetz et al., 1996). The other franchise value arises from what is referred to as "bank-related" origins (Demsetz et al., 1996). This included gains in key areas such as efficiency distinction and differences in the nature of lending dealings (Demsetz et al., 1996). These bank-related sources remain as the most important source of franchise value in the banking system (e.g., Arping, 2019; Demsetz et al., 1996). To an extent it has been suggested that, as competition increases, banks are unable to obtain steady earnings as competition causes them to reduce their rates to levels good enough to cater for their operating expenses and other costs (Demsetz et al., 1996). Accordingly, competition intensifies in the banking system, the PV of anticipated earnings decreases (Keeley, 1990). This makes bank failure less expensive (Keeley, 1990).

The implication is that, banks primarily reduce their BRT as a way of protecting their franchise value and monopoly profits (Arping, 2019). However, as banks profit decline with increased competition, banks tend to lower margins and thus lower discounted net value. With lower net value, banks are more willing to take high risk (Nilsen et al., 2016). The higher level of undertaken risk may translate into lower quality of the banks' asset portfolio (Mustafa & Toci, 2018).

Another strand of banking literature has investigated the effect of competition on BRT from the perspective of adverse selection problem (Mustapha & Toci, 2018). Adverse selection denotes to a market situation which happens when a buyer and a seller have differences in market information. In banking, this stems from imperfect information in the loan market (Heimdal et al., 2015). For example, banks that set the same rate for all their customers may

encounter the risk of unfavorably selecting the least gainful borrowers. Further, as competition increases in the market, there is the tendency for a declined loan applicant to make a new application for a loan in competing banks due to "information dispersion" (Marquez, 2002). The adverse selection problem may be mitigated through effective screening procedures implemented by banks (Mustapha & Toci, 2018). However, as competition intensifies individual banks have minimal information concerning the credit worthiness of borrowers. This prevents proper screening by the banks and results in banks granting credit to borrowers with poor credit history (Marquez, 2002), thereby lowering the quality of loan portfolio the bank. (Marquez, 2002; Boot & Greenbaum, 1993).

Empirical literature exploring competition and BRT differ with regards to the selected sample, the period under study, competition and BRT proxies as well as the methodology used (see Table 3.3).

***Table 3.3**: Summary of studies that establish positive link between competition and risk-taking*

Publications	**Employed data**	**Period of study**	**Competition measures**	**Risk-taking measure**	**Findings and conclusions**
Berger et al. (2009)	23 developed countries *8,235 banks*	1999-2005	Lerner index	Z-score NPLs	Report a positive link between Lerner index and NPLs. Competition increases risk-taking consistent with competition-fragility view
Agoraki et al. (2011)	13 European banking systems *546 banks*	1998-2005	Lerner index	Z-score NPLs	Find a positive link between Lerner index and NPLs. As competition increases risk taking increases.
Beck et al. (2013)	79 countries *17,055 banks*	1994-2009	Lerner index and H-statistics	Z-score	Document a positive link between Lerner index and Z-score in support of competition-fragility view
Soedarmono et al. (2013)	11 Asian countries *636 banks*	1994-2009	Lerner index	Z-score	Report that Lerner index relates positively with Z-score in line with competition fragility view.
Jiménez et al. (2013)	Spanish banking industry *107 banks*	1988-2003	Lerner index	NPLs	Establish positive link between Lerner index and NPLs in support of competition-fragility.
Liu & Wilson (2013)	Japanese banking industry *732 banks*	2000-2009	Lerner index	Z-score	They report a positive link between Lerner index and Z-score. As competition increases, risk-taking increases
Bushman et al. (2016)	US banking industry *13,730 banks*	1996-2012	HHI Lerner index	Z-score, loan loss provision	They document a positive link between Lerner index and, loan loss provision and Z-score in support of competition fragility view
Sarkar & Sensarma (2016)	Indian banking industry *37 banks*	1999-2013	H-statistics	Default risk	They report a positive link between H-statistics and default risk in support of competition-fragility view

Noman et al. (2017)	5 Asian banking industry *180 banks*	1990-2014	H-statistics and Lerner index	Z-score NPLs	They document a positive link between H-statistics and Z-score and conclude that competition increases bank risk-taking.
Kabir & Worthington (2017)	16 developing countries *45 banks*	2000-2012	Lerner index	Z-score NPLs	Find a positive link between Z-score and NPLs in support of competition-fragility view
Leroy & Lucotte (2017)	European banking industry 97 banks	2004-2013	Lerner index	Z-score	Observe a positive connection between Lerner index and Z-score. Competition increases bank risk-taking.
Akande et al. (2018)	African 440 banks	2006-2015	Lerner index	Off balance sheet risk	They document a positive link between Lerner index and off-balance sheet risk in support of competition-fragility view.

Sources: Compiled by the author (2020)

Several studies based on individual countries document evidence in support of Keeley (1990) (e.g., Liu & Wilson, 2013; Bofondi & Gobbi, 2004). Similarly, a number of cross-country investigations have examined the competition-bank risk-taking nexus and provide findings that confirm the "competition-fragility" view (e.g., Akande et al., 2018; Leroy & Lucotte, 2017; Noman et al., 2017; Beck et al., 2013; Liu & Wilson 2013; Berger et al., 2009; Yeyati & Micco, 2007). For example, Liu and Wilson (2013) explore competition effect on BRT for Japanese banking system from 2000 to 2009. They report that Lerner index is positively related with NPLs in a sample of 732 banks. Berger et al. (2009) conducts similar analysis in an international sample of 8235 banks. The banks were selected from 23 developed markets from 1999 to 2005. The researchers document that Lerner index positively and significantly influences NPLs in the 23 countries.

From developing economies perspective, Noman et al. (2017) uses a sample of 180 Asian banks from 1990 to 2014. The evidence of their analysis shows that as competition increases, bank risk-taking also increases. The results show a positive link between H-statistics and Z-score. Akande et al. (2018) report that, competition increases BRT in an investigation based on 440 banks in Africa from 2006 to 2015. In spite of the interest in their research to BRT studies in Africa, the risk-taking proxy employed in Akande et al. (2018) study is skewed to only one type of BRT in the region, which is off-balance sheet risk. This may limit the generalization of their findings.

Alternatively, "competition-stability" view states that, BRT decreases with competition. This view is built on "risk shifting" hypothesis which was developed by Boyd and De Nicolo (BDN) (2005). They propose that, as competition in the banking system intensifies, there is a corresponding reduction in the interest rate charged by the banks. BDN (2005) explain that low

lending rates lessens the borrowing cost of doing business. This enhances and lead to an increase in entrepreneurial activity and investment. As borrowers pay low interest rate on loans, their motivation to engage in excessive risk-taking decreases, hence making loans safer in the banking system. The implication of this model is that, the quality of banks' loan portfolio is mainly influenced by their borrowers risk-taking behaviour and not determined by the banks. They conclude that, the resulting decrease in loan default rates leads to a decline in risk-taking in the banking system.

Then again, banks that do well in establishing strong franchise value will work to protect (Demsetz et al., 1996). As a result, banks with substantial high franchise value might be inclined to function more cautious way. For instance, large franchise value banks tend to minimize granting of loans to high risk borrowers (Demsetz et al., 1996). In addition, such banks have the tendency to typically diversify their credit portfolio as a means of reducing their exposure to risk (Demsetz et al., 1996), thereby reducing BRT (Demsetz et al., 1996).

Besides, excessive competition in banking offers depositors with more alternatives in terms of where to place their deposits (Mustapha & Toci 2018). With more options in the deposit markets, depositors may "penalize" excessive risk-taking banks simply by moving their deposits to banks they consider less risky and safer (Mustapha & Toci 2018). From the perspective of theory of perfect competition, depositors may be more informed on the risk-behaviour of banks or may receive signals that may help them better assess the risk behaviour of individual banks in the market.

Empirically, prior studies (see Table 3.4) find evidence for "competition-stability" view (e.g., Arping et al., 2019; Mustapha & Toci, 2018; Sarkar & Sensarma, 2016; Tabak et al., 2015; Schaeck & Cihak, 2014; Boyd et al., 2006).

***Table 3.4**: Summary of studies that find negative link between competition and risk-taking*

Publications	**Employed data**	**Period of study**	**Competition measure**	**Risk-taking measure**	**Findings and conclusions**
Boyd et al. (2006)	US banking system 2500	1993-2004	HHI	Z-score	They find positive link between HHI and Z-score in support of competition stability view
Amidu & Wolf, (2013)	55 developing countries *978 banks*	2000-2013	Lerner index and HHI	Z-score NPLs	They establish a negative link between Lerner index and HHI, and Z-score and NPLs.
Angineret al. (2014)	63 developed countries *1872 banks*	1997-2009	Lerner index and HHI	Z-score distance to default	They document a negative link between Lerner and HHI, and Z-score and distance to default in support of competition-stability view
Fu et al. (2014)	14 Asian countries *786 banks*	2003-2010	Lerner index	Z-score	Authors report a negative link between Lerner index and Z-score. Bank risk-taking decreases with

					competition in support of competition-stability view
Schaeck & Cihak (2014)	10 European countries *3,325 banks*	1995-2005	Boone indicator	Z-score	They establish a negative link between Boone indicator and Z-score. Competition decreases risk-taking in the banking systems.
Tabak et al (2015)	Brazilian banking industry *79 banks*	2001-2011	H-statistics	Z-score NPLs	An increase in competition (H-statistics) decreases risk-taking (Z-score and NPLs) in support of competition-stability view.
Gonzalez et al. (2017)	MENA Countries *350 banks*	2005-2012	H-statistics	Z-score	The result shows a negative link between H-statistics and Z-score, suggesting that as competition increases, risk-taking decreases.
Noman et al. (2017)	5 Asian countries *180 banks*	1990-2014	H-statistics, HHI and Lerner index	Z-score NPLs and equity ratio	They find that H-statistics relates negatively with NPLs, while Lerner index relates negatively with both Z-score and equity ratio in support of competition-stability
Mustapha & Tocci (2018)	15 European countries *1497 banks*	1999-2009	H-statistics	Z-score NPLs	They report that competition measured by H-statistics reduces risk-taking (NPLs) in support of competition-stability view.
Maji & Hazarika, (2018)	Indian banking industry *39 banks*	1999-2014	H-statistics and HHI	Z-score	They document a negative link between HHI and Z-score. This indicates that, as competition increases, risk-taking decreases in support of competition-stability view.

Note: MENA refers to Middle East and North Africa, HHI denotes Herfindahl-Hirschman Index.

Boyd et al. (2006) examine the link between competition and bank risk-taking in a sample of 2,500 small rural banks in US. In addition, they employ a panel of 2700 banks from 134 countries. Their sample period starts in 1993 and ends in 2004. They document a negative relationship between Herfindahl-Hirschman index (HHI) and Z-score. Similarly, Schaeck and Cihak (2014) investigate the same link across 10 European countries by sampling 3,325 banks from 1995 to 2005. The researchers document an inverse link between Boone indicator and Z-score. Further, Mustapha and Toci (2018) explore the effect of competition on bank risk-taking in 15 European countries. Their investigation contained 1497 banks from 1999 to 2009. They also report an inverse link between Lerner index and loans-loss provision.

To sum up, due to the FSR, banks in the ESSA region operate in a challenging environment characterized by tighter funding conditions with rising competition for deposit and loans (Stijns & Revoltella, 2016). In addition, the emergence of pan-African baking groups and microfinance institutions have intensified bank competition in the region. The increase in competition for deposits among banks has consequences for BRT behaviour. This can undermine prudent banking practices, particularly as regulation and supervision in the region is weak. For example, as banks pay higher deposit rate due to competition in the region, they face higher repayment burden and can lead the banks to undertake high risky investments.

Consistent with the above discussion, the study predicts a positive link between competition and BRT in ESSA. Thus, the final hypothesis is as follows:

H12: The risk-taking behaviour of banks increases with competition, confirming the traditional "competition-fragility" view.

Chapter 4

4 Methodology and data with descriptive and correlation diagnostics

The chapter provides the data, sources of data and empirical specification of the thesis. In addition, the chapter presents the descriptive statistics and correlation diagnostic results. Specifically, section 4.1 provides the data and sources of the data employed in the study. Section 4.2 focuses on all the variables employed in the study and their measurement. In section 4.3, the empirical specifications that will be used in testing all the hypotheses will be provided. Section 4.4 will present the descriptive statistics, whilst section 4.5 discusses the correlation diagnostic results of the thesis.

4.1 Data and sources of data

The banks used for the study were drawn from all the 16 countries in ESSA. The countries were drawn from the three main blocs in the ESSA region; six countries from East; Kenya, Malawi, Mauritius, Tanzania, Uganda, and Zambia, five countries from West; Ghana, Gambia, Liberia, Nigeria, and Sierra Leone, and five countries from Southern Africa; Botswana, Lesotho, Namibia, South Africa, and Zimbabwe (Table 4.1).

Table 4.1: Country selection procedures

Panel A: Country selection	**No.**	
Number of SSA countries	46	
Total Non-English-speaking countries	(30)	
English-speaking countries	16	
Panel B: Classification of countries by blocs	No.	%
East of ESSA	5	100
West of ESSA	5	100
South of ESSA	6	100
Total number of countries	**16**	**100**

The study focused on banks in the ESSA region for a number of reasons. These countries were selected because they have a common official language which is English. This facilitates

data collection by eliminating language barriers. More importantly, the thesis excluded French-speaking Sub-Saharan African (FSSA) countries (see Table 4.1) in the region from the data due to resource constraints. In order to include FSSA countries, the researcher will have to employ the services of a translator to translate the information contained in the annual report from French to English, due to language barrier. As will be discussed in section 4.2, several key variables employed in the study including CGI, SBD and some aspects of EC were manually collected from the annual reports of the banks. In particular, the measure of the CGI is based on information disclosed in the annual report (qualitative) which implied that, to correctly collect such information, the researcher needed to have such documents translated into English.

Moreover, and as will be discussed later, the SBD of most of the banks included in the study are not available in major worldwide databases. Accordingly, the study measured SBD through content analysis which requires both qualitative and quantitative information contained in the annual report of the banks. Thus, the ability of the researcher to correctly collect the qualitative information on banks' SBD initiatives played a crucial role in the exclusion of banks in FSSA countries in the region. Besides, this practice is consistent with prior studies on corporate governance in the SSA region that similarly excluded banks in FSSA countries in their final sample on the ground of language ability of the researcher (Sarpong-Kumankoma et al., 2019; Siueia et al., 2019; Waweru et al., 2009).

Nonetheless, the 16 ESSA countries have the most matured banking and capital markets in the region. The total GDP of the 16 countries stood at US$2,885.78 billion as at 2018 as compared to the GDP of the entire SSA of US$4,200.85 billion and accounted for nearly 70% of the total SSA GDP (see Table 4.2). In order to avoid survivorship bias, the study included all banks operating in the 16 ESSA countries from 2007 to 2018 to accommodate entry and exit of banks during the study period.

The study period starts in 2007 and ends in 2018. In line with prior CG and sustainability studies (e.g., Elmagrhi et al., 2020; Albassam, 2014, Ntim & Soobaroyen, 2013; Ntim, 2009), the study period spans both pre-and post-2015, the period in which the SDGs were adopted. In addition, this was the period in which most of the CG codes in the ESSA countries were either implemented or revised. This helps in assessing whether the adoption of the SDGs and the implementation or the revision of the CG codes have helped in improving CG standards especially with regards to influencing compensation of executives and sustainable banking in the ESSA countries.

Table 4.2: The GDP of the countries in ESSA from 2007 to 2018 (US$ billion)

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Botswana	23.3	25.2	23.5	25.8	27.9	29.7	33.6	35.7	35.4	37.4	39.2	41.9
The Gambia	3.6	3.9	4.2	4.5	4.2	4.5	4.7	4.7	5.0	5.1	5.4	5.9
Ghana	77.2	85.8	91.2	99.5	116.0	128.2	139.9	146.6	151.3	158.2	174.3	189.7
Kenya	86.0	87.8	91.4	100.3	108.6	115.8	124.7	133.8	143.0	152.9	163.4	178.0
Lesotho	3.7	4.1	4.3	4.6	5.0	5.4	5.7	5.9	6.2	6.5	6.5	6.7
Liberia	3.4	3.7	3.9	4.2	4.6	5.1	5.7	5.8	5.9	5.8	6.1	6.3
Malawi	11.9	13.0	14.2	15.3	16.4	17.1	18.3	19.7	20.4	21.1	22.4	23.7
Mauritius	16.5	17.8	18.5	19.5	20.7	21.9	23.0	24.3	25.4	26.7	28.2	30.0
Namibia	15.9	16.6	16.8	18.0	19.3	20.7	22.2	24.0	25.3	25.5	26.0	26.7
Nigeria	595.7	651.0	710.8	800.0	856.6	910.4	976.4	1057.2	1096.5	1090.0	1119.4	1168.8
Sierra Leone	6.4	6.9	7.1	7.6	8.2	9.7	11.9	12.7	10.2	10.9	11.5	12.2
South Africa	552.1	580.8	576.2	600.7	633.4	659.8	688.1	713.7	729.8	740.3	764.9	789.7
Tanzania	75.6	81.4	86.4	93.0	102.4	109.8	119.3	129.7	139.1	150.2	163.4	179.0
Uganda	50.2	56.5	61.5	67.0	73.1	76.2	81.2	86.4	92.3	95.4	102.1	111.2
Zambia	33.0	36.2	39.9	44.5	47.9	52.6	56.2	59.9	62.3	65.3	68.9	73.4
Zimbabwe	21.5	18.3	19.8	24.0	28.0	33.2	34.5	36.0	37.0	37.7	40.2	42.6
Total	**1575.9**	**1689.0**	**1769.7**	**1928.4**	**2072.4**	**2199.9**	**2345.2**	**2496.0**	**2585.1**	**2628.9**	**2741.9**	**2885.8**
SSA	**2216.2**	**2386.8**	**2493.3**	**2696.6**	**2925.3**	**3108.4**	**3323.3**	**3556.4**	**3704.1**	**3790.5**	**3973.8**	**4200.8**

Source: Compilation from International Monetary Fund, World Economic Outlook Database, 2020

Furthermore, most of the banks' annual reports became publicly accessible on their websites in 2007. In addition, that was the period that the codes in the region required banks to make available EC details in their annual reports. This paved the way for data that previously has been publicly unavailable to become accessible. This allowed the researcher to collect data from 2007 across the countries in the region. The year 2018 is the end of the sample period because that was the most current year that data was available[1]. The collection of data for the study started in October 2016 and ended in December 2019.

Following the convention in literature, the study excluded banks with missing data or foreign-owned banks that published their annual reports worldwide as consolidated financial statements (e.g., Siueia et al., 2019; Akande, 2018). Further, the study focused on banks and specialized financial institutions whose nature and operations are like that of commercial banks. Consistent with prior banking studies in the region (e.g., Akande, 2018; Motsi et al., 2018), this was done to ensure uniformity in the sampled banks. The final data consists of 220

[1] Data collection for the study were collected in two phases. Financial data were sourced from BankScope in 2016 as well as FitchConnect in 2019 and supplemented with annual reports where necessary. CG variables were manually collected from the annual reports which were sourced from the websites of the banks.

banks with 2027 bank-year observations. Table 4.3 captures a list of ESSA countries and the number of banks in each country contained in the study. The data is much higher when compared with prior banking studies in the region (e.g., Siueia et al., 2019; Oyewumi et al., 2018; Tijani et al., 2017; Waweru et al., 2009). For instance, Siueia et al. (2019) study was based on 20 banks for two countries over the period 2012-2016 with 100 bank-year observations. Tijani et al. (2017) study was based on only one bank in Nigeria over the period 1992-2014 with only 19 bank-year observations, whereas Oyewumi et al. (2018) sampled 12 banks in Nigeria from 2010 to 2014 with 60 bank year-observations. In their international sample, Waweru et al. (2009) included only 4 banks in South Africa in their final sample in 2005.

Table 4.3: Composition of the banks by countries

Country	Bank Population	Bank	Representation (%)
Botswana	10	10	100
Gambia	12	8	67
Ghana	24	24	100
Kenya	41	30	73
Lesotho	4	4	100
Liberia	9	6	67
Malawi	9	5	56
Mauritius	21	15	71
Namibia	8	5	63
Nigeria	20	19	95
Sierra Leone	12	4	33
South Africa	21	20	95
Tanzania	38	25	66
Uganda	25	20	80
Zambia	17	13	76
Zimbabwe	13	12	92
Total	**284**	**220**	**77**

Notes: Population and bank refer to count, and representation refers to bank as a percentage of population.

The study employed two main types of data for the investigations. The first set of data consisted of CG and SBD, which were collected manually from the annual reports of the sampled banks. The annual reports were sourced from the websites of the sampled banks. The second category comprised of financial data, including executive competition, financial performance, competition, bank risk-taking and bank-specific control data which were collected from BankScope, FitchConnect and annual reports of the banks. The annual reports

of the banks also served as supplementary sources of these data in instances where such data were not available in BankScope or FitchConnect.

Some of the banks in ESSA countries provide their SBD in the form of qualitative statements in their annual reports. Other banks also give accounts of quantitative SBD embarked upon in their annual reports. However, most of the banks provide both qualitative and quantitative SBD in their annual reports. The study therefore adopts both qualitative and quantitative approaches in assessing SBD of the banks. These disclosures were mostly found in the chairperson's address and/or CEO's report to the shareholders; whilst others were found in the notes to the financial statements of the banks. Hence, annual reports serve as the primary source of banks' financial and non-financial SBD information in the ESSA region.

4.2 Variables measurement

4.2.1 Sustainable banking disclosure measures

Prior literature suggests several approaches for measuring SBD. A number of studies use ready SBD indices made available in major worldwide databases such as Bloomberg ESG, KLD, Asset4 ESG (e.g., Buallay et al., 2020; Elkhashen, 2019; Galant & Cadez, 2017). Others develop SBD indices (e.g., Siueia et al., 2019; Lanis & Richardson, 2012). Galant and Cadez (2017) suggest that the choice of measure(s) should be informed by data availability and nature of research questions. For example, SBD data accessibility in key databases appears to be a decisive factor for research in finding the way of assessing SBD in developed countries (Elkhashen, 2019). However, rating agencies have limited coverage of banks. For instance, the developed indices provide SBD data on banks mainly in developed countries. Accordingly, they are relevant to banking studies that are conducted in developed countries.

Based on the cross-country nature of this research, where it requires measuring SBD of banks in a developing economy (ESSA), this study follows a great deal of prior research (e.g., Siueia et al., 2019; Galant & Cadez, 2017; Lanis & Richardson, 2012), and measures SBD based on content analysis. This approach involves designing a construct of interest, gathering information about the construct and codifying qualitative information to derive the quantitative scales that can be used in statistical analysis (Galant & Cadez, 2017). The main advantage of this approach is its flexibility for the researcher, as the researcher can specify SBD dimensions of interest, collect data based on the selected dimensions and code data numerically for the statistical analysis (Galant & Cadez, 2017).

Specifically, and consistent with prior sustainability studies in the banking sector in an emerging economy (e.g., Kartadjumena & Rodgers, 2019; Kartadjumena, 2019), and few banking studies in ESSA region (e.g., Siueia et al., 2019), the study distinctively developed SBD indices based on quantitative and qualitative sustainable banking data collected from the annual reports of the banks. Following Kartadjumena and Rodgers (2019), the study argues that a combination of quantitative and qualitative disclosures based on content analysis technique is more objective and informative as this will provide more information for the stakeholders' interests. This study employs this approach to examine the narration in the sustainability reporting, or the annual report, or the corporate responsibility reporting of ESSA banks, based on requirement from the Combined CG Code of the ESSA countries. The qualitative based scores include: (i) general or rhetorical (including instances of ritualistic and repeated) statements deemed to be purely symbolic with no evidence of actual actions/activities on the ground (with a score of "1"), and (ii) a description of what has been achieved or accomplished or considered to be a message of assurance by the bank (beyond symbolic) with a score of "2".

The first quantitative based scores employed in the study focus on whether the qualitative statement provided in (ii) above is backed by quantitative or monetary figures (with a score of "3"). This is deemed to be substantive as the banks provide indication of the measure of events or activities. The second quantitative score relies on information provided in the first quantitative measure with a score of "4". If the first quantitative score above is backed by clear valuations of performance (comparative to previous year) or actions (when even they are "negative" event), and which permits evaluation between banks employing external reporting models/benchmarks/assurance that are considered to be all-inclusive. Examples include external assurance of the SBD report by the BIG4 audit firms.

Subsequently, the study analysis the content of six broad SBD themes made up of 135 SBD disclosures: (i) social investment and service quality (27), (ii) health and safety (40), (iii) ethics and human rights (12), (iv) environment (21), (v) community involvement (21) and (vi) employees (14). These SBD themes were selected based on the SDGs 2015, 2016 GRI's reporting guidance and the CG codes in the region. This constitutes one of the most comprehensive datasets to be employed on SBD in the region. Appendix 1 lists all the 135 items that were included in the score.

4.2.2 Financial performance measures

The financial performance of banks is typically measured with Accounting-Based Indicators (ABI) or Market-Based Indicators (MBI). The key advantage of ABI is the availability of data for all banks and their comparability. Examples include ROA, ROE and ROS among others (Galant & Cadez, 2017). The main limitation of ABI is that, they are historical measures (Al-Tuwaijri et al., 2004). In addition, they fail to take into account the size of firms. For example, ABI like ROA may be biased if the sample includes companies from different industries due to the varying age and structure of assets across industries (Galant & Cadez, 2017).

Examples of MBI include Tobin's Q, market to book ratio and stock returns (Kabir & Thai, 2017). The key advantage of MBI is their contemporariness, inferring that account reflect changes in SBD faster than ABI (Galant & Cadez, 2017). The main limitation of MBI is that they are only available for publicly listed banks. Further, MBI incorporate systematic factors such as recession (Galant & Cadez, 2017), which may not be bank specific perception of SBD.

In line with Esteban-Sanchez et al. (2017), this study applies ROA and ROE as the measures of FP. The study chose ROA because it represents a good proxy of economic growth and reflects expected future performance of banks (Galbreath, 2011). ROA was also used by several scholars to assess the relationships between economic and sustainability performance for the banking sector (D'apolito et al., 2019; Siueia et al., 2019; Brogi & Lagasio, 2019, Memon et al., 2019; Forcadell & Aracil, 2017, Esteban-Sanchez et al. 2017). In addition, ROA and ROE are appropriate indicators of FP because the study is based on banks and as such, the selection of these measures does not suffer from industry bias (Maqbool & Zameer, 2018; Galant & Cadez, 2017). Consistent with prior studies in the region (e.g., Siueia et al., 2019), and due to lack of MBI data, the study excluded MBI because most of the banks in the region are not publicly listed. Moreover, these indicators are more sensitive to bank specific (unsystematic) perceptions of SBD (Galant & Cadez, 2017).

4.2.3 Bank risk-taking measure

Following prior research (e.g., Moyo, 2018; Mustapha & Toci 2018; Berger et al., 2014), Z-score, non-performing loans (NPLs), loan-loss provision (LPROV) and capital adequacy ratio (CAR), are the dependent variable. Based on well-established studies (e.g., Maji & Hazarika, 2018; Mustapha & Toci, 2018), Z-score for the sampled banks is calculated as follows:

$$\text{Z-score}_{it} = \frac{\text{ROA}i,t \; - \text{EA}i,t}{\sigma\text{ROA}i,t} \qquad \text{[Eqn 1]}$$

Where $ROA_{i,t}$ represents return on asset for a bank *i* at time t, $EA_{i,t}$ is the equity to total assets ratio for bank *i* at time t, $\sigma ROA_{i,t}$ denote is the standard deviation of return on assets of bank *i* at a time *t*. Additionally, and in line with Chen and Lin (2016) and Eibannan (2017), NPLs is defined as bank ratio of non-performing loans to total loans in a financial year; a larger value suggests a riskier credit portfolio. Similarly, and consistent with Mustapha & Toci (2018) and Al-Khouri (2012), LPROV is denotes the ratio of loan loss provision to total loans in a financial year. Following Mustapha & Toci (2018) and Eibannan (2017), CAR represents the ratio of banks' capital to risk weighted assets in a particular year. These bank risk-taking proxies were chosen because they have been utilized in several studies in order to test the association among CG, competition and risk-taking in banks (e.g., Zhou et al., 2019; Mustapha & Toci, 2018 Chen & Lin, 2016; Al-Khouri, 2012).

4.2.4 Executive compensation measures

In most of the ESSA countries, executive directors' compensation is mainly in the form of a base salary with benefits and a performance based annual bonus (Waweru et al., 2009). The bonus payment is based mainly on financial measures such as profits (Waweru et al., 2009). Non-executive members of the boards' compensation are in the form of annual fees and sitting allowance for board meetings (Waweru et al., 2009). Consistent with prior studies in the non-financial sector in the region, EC is measured in three ways (e.g., Ntim et al., 2019; Waweru et al., 2009).

In line with Ntim et al. (2019), executive directors' compensation (EPAY) denotes the natural logarithm of annual cash compensation to executive directors of the bank scaled by the entire number of directors who are executives in a financial year. EPAY includes annual salary, cash bonus and any additional stated cash payment to executive directors in a financial year.

Similarly, and following Elmagrhi et al. (2020), non-executive directors' compensation (NPAY) refers to the natural logarithm of annual cash compensation to all directors of the board who are non-executives scaled by the entire number of non-executive directors of the bank in a financial year. NPAY comprises annual sitting allowance, cash bonus and any other stated cash payment made to non-executive directors in a financial year.

Finally, and as applied by Elmagrhi et al. (2020) the total executive directors' compensation (TPAY) represents the natural logarithm of annual cash compensation to both executive and non-executive directors of the board scaled by the sum of executive and non-executive directors

of the bank in a financial year. TPAY includes total salary, total cash bonus, and any other stated cash payment to all directors in a financial year.

4.2.5 Corporate governance disclosure index and other corporate governance measures

First, following Ntim and Soobaroyen (2013), a binary CG disclosure index, covering 100 internal governance provisions were employed in the study. The selection of the 100 CG provisions are based on the Commonwealth CG code, individual country CG codes, existing literature and annual reports of the banks. Thus, the CGI is a collection of 100 all-inclusive set of CG provisions contained in the Combined Code in the ESSA region (Ghana, SEC, 2018, 2010; Nigeria, SEC 2018, 2011; Kenya, CMA, 2014 and South Africa, King Report, 2016). The provisions cover four extensive areas: (i) directors and board disclosures (43); (ii) accounting, auditing and transparency disclosures (22); (iii) risk management, internal audit, and control disclosures (13); and (iv) compliance, shareholder rights and enforcement disclosures (22). The provisions are provided in Appendix 2 as employed by prior researchers in the region (e.g., Rashid, 2018; Ntim & Soobaroyen, 2013).

A dichotomous method was also applied, whereby a bank was assigned '1' if a CG item was fully complied with; otherwise, '0' was awarded (Rashid, 2018; Ntim & Soobaroyen, 2013). Appendix 2 lists all the 100 CG items that were included in the score. These studies applied this method based on non-financial firms in the region. In addition, it provides explicit definitions of the coding instruments used and how the variables were measured. Specifically, the study operationalizes the notion of good CG by assessing the presence or absence of 100 individual CG items[2] based on the ESSA Combined Code, with banks scoring higher values regarded as better-governed (i.e., good/strong governance) and vice-versa (poor/weak governance) (Elmagrhi et al., 2020). This study adopts same in the banking system in the ESSA region. It is appropriate to adopt same approach because the internal CG mechanisms of the banks have similar structures like the non-financial sector. Notably, this is consistent with prior banking studies that have relied on either national (e.g., Grupta & Bala, 2020; Orazalin, 2019; Das et al., 2015; Jizi et al., 2014), or combined codes of corporate governance (e.g., Liang et al., 2020; Tarchouna et al., 2017; Ahmed, 2017 Isukul & Chizea, 2017), in constructing their aggregate CG indices.

[2] These 100 governance provisions were mainly extracted from the ESSA Combined Code. The study also relied on other sources, such as the Commonwealth CG code, UK Cadbury Report, Disclosure and Transparency Rules, and Insider Trading Law, in determining the final governance provisions included in the index

The CGI is distinct from prior banking studies in the region in three main aspects. Crucially, and unlike prior studies that focus on specific pillars of CG in isolation, for instance, board independence (e.g., Ogege & Boloupremo, 2014; Baroko & Brown, 2008), board size (e.g., Ogege & Boloupremo, 2014; Ajala et al., 2012), and shareholder rights (e.g., Foyeke et al., 2015; Baroko & Brown, 2008), amongst others, the CGI covers all pillars of CG in the region. This permits the existence of potential interactions and interdependences among alternative internal CG structures (Ntim, 2009). Further, consistent with prior international banking studies (e.g., Liang et al., 2020; Tarchouna et al., 2017), the CGI covers international internal CG issues, such as the board and directors, and internal audit (see sections I and II of Appendix 2). Finally, the CGI is distinct in its coverage of ESSA banking context specific affirmative action and investor protection CG provisions under the Combined CG Code (see section IV of Appendix 2).

Additionally, to examine the impact of board attributes and ownership structures on the bank risk-taking, the thesis employs a number of individual CG variables, measured by employing (i) independent financial experts (EXPERT), (ii) number of board meetings (NBMs), (iv) institutional ownership (ISONR), (v) government ownership (GOVNR) and (vi) foreign ownership (FONR)

4.2.6 Competition measures

The next set of variables are the competition measures. There are several approaches established to assess competition in banking. These measures are of two main forms: structural and non-structural methods. The structural approach is framed along structural conduct performance paradigm. This approach was pioneered by Mason (1939) and Bain (1951). The structural conduct performance approach focuses on conduct and performance of banks (Moyo, 2018), especially with regards to the structural features of the markets in which the banks operate (Moyo, 2018). Conduct denotes the manner in which banks function in key aspects including pricing, research and development, advertisement, among others. Performance denotes efficiency which is largely assessed by the degree of market power, with higher market power indicating lower efficiency (Kocabay, 2009). Structural estimates are concerned with concentration ratios, number of banks and the Herfindahl Hirschman index (HHI).

Critics of this approach argue that, the market structure is impacted by conduct and performance. In addition, measuring competition based on this approach is criticized because competition in banking is not exclusively based on market structure indicators (e.g., Claessens, 2009; Berger et al., 2004). Claessens (2009), contends that competition in banking ought to be

determined based on the actual behaviour of banks. Due to the theoretical and empirical shortcomings of the structural conduct performance, a lot of recent studies in banking have neglected this approach and focused on direct measure of competition (e.g., Akande, 2018; Berger et al., 2014).

The non-structural approach focuses on examining the extent of competition directly through behavior of banks in the market. The main advantage of this approach is that unlike structural conduct performance, the non-structural approach does not measure the competitive conduct of banks through the market structure, but directly measure banks' conduct (Kocabay, 2009). The non-structural approach measures of competition include the Lerner index (Lerner, 1934), H-statistic (Panzar & Rosse, 1987) and the Boone indicator (2008). The study employed Lerner index as the primary measure, while H-statistics served as an alternative measure and thus more in-depth discussion on these measures will be provided in the next section.

The Lerner index measure is chosen as primary competition measure because of the following reasons. First, it is simple, transparent and intuitively appealing index of competition which does not require stringent data (Delis et al., 2016; Fu et al., 2014). Second, the index has the capacity to directly estimate bank competition as it has straightforward interpretation (Delis et al., 2016; Fu et al., 2014). Third, it is bank-specific, vary over time which permits assessment of competition among banks and over a period (e.g., Delis et al., 2016; Beck et al., 2013). Fourth, the index can be estimated with a few observations (Leon, 2015). Finally, like all non-structural approach measures, it allows competition to be measured separately for different banking markets.

Notwithstanding the above highlighted attributes, it has the following shortcomings. The indicator may not precisely capture the degree of product substitutability in the market. Indeed, Oliver et al. (2006) indicate that overestimation of competition by Lerner index is possible if the risk-taking of banks is not properly accounted for.

Lerner index represents the mark-up of price over marginal costs (Berger et al., 2009).

$$\text{Lerner index}_{it} = \frac{\text{P}it - \text{MC}it}{\text{P}it} \qquad \text{[Eqn 2]}$$

In Equation 2, p_{it} is the output price of bank i at time t and is defined as total revenue divided by total assets. Marginal cost is estimated by differentiating the translog cost function with one output (total assets) by output (Delis et al., 2016; Berger et al., 2009). Consistent with past

studies (e.g., Delis et al., 2016; Berger et al., 2009), MC_{it} is derived following translog cost function as follows:

$$\mathrm{InTC_{it}} = \alpha_0 + \sum_{j=1}^{2} \alpha_1 \, \mathrm{Inw_{it}^{j}} + {}^{1}/_{2} \sum_{j=1}^{2} \sum_{k=1}^{2} \alpha_{jk} \, \mathrm{Inw_{it}^{j}} + \beta \mathrm{InTTA_{it}} + {}^{1}/_{2} \, \beta_2 (\mathrm{InTA_{it}})^2 + \sum_{k=1}^{2} \beta_{2j} \, \mathrm{InTA_{it} Inw_{it}^{j}} + \gamma_{It} \mathrm{T} + {}^{1}/_{2} \, \gamma_{2t} \mathrm{T}^2 + \sum_{j=1}^{2} \gamma_{3t} \, \mathrm{TInw_{it}^{j}} + \gamma_{4t} \mathrm{TInTA_{it}} + \varepsilon_i \qquad \text{[Eqn 3]}$$

Where;

TC_i = the bank's total costs

TA_i = the total assets

w_i = the price of the factors of production, defined as below:

w_1 = the price of purchased funds: interest expenses/total deposits and short-term funding

w_2 = the price of labor and physical capital: non-interest expenses/fixed assets

T = the time trend that captures the influence of technological changes that lead to shifts in the cost function over time.

ε = error term.

From Equation (3), the marginal costs can be derived as follows:

$$MC_{TAit} = \frac{\partial TC_{it}}{\partial TA_{it}} = (\beta_1 + \beta_2 InTA_{it} + \sum_{j=1}^{2} \beta_{2j} Inw_{it}^{j} + \gamma_{4t} T) \frac{TC_{it}}{TA_{it}} \qquad \text{[Eqn 4]}$$

Using marginal costs and price, the study calculated the Lerner index for each bank and for each year and thus obtained a direct bank level measure of competition. The index ranges between 0 and 1, with zero reflecting perfect competition and high values corresponding to less competition or high market power. Although not sustainable in the long run, however the index can also be negative in an extreme case where price is less than marginal cost (P<MC) (Delis et al., 2016) which would indicate that the bank is making losses in the year as marginal cost is higher than price.

The study used Panzar-Rosse statistic (PRH) as an alternative measure of competition. PRH is defined as the elasticity of revenue with respect to the marginal cost of inputs used in the production of banking services (Jeon et al., 2011). Like Lerner index, it has been employed in banking competition studies because it requires easily available bank-specific variables (Tabak et al., 2012). PRH examines the extent to which a change in input price is translated in the

equilibrium revenues earned by a specific bank. It provides a measure referred to as H-statistic which ranges between 0 and 1. H-statistics is based on the responsiveness of banks' revenue to changes in factor input prices (Schaeck & Cihak, 2012).

PRH has the following advantages. The model is simple and does not pose stringent data requirements as the test can be done by running a single equation with a few bank level-variables (Leon, 2015). It can be estimated for a relatively small number of observations, which is critical for studies in less mature banking system (Leon, 2015). The model is robust to the extent of the market as no specific market definition is captured in estimating the revenue equation (Shaffer, 2004). Finally, only the data from the banks included in the sample are required to estimate the revenue equation and this is a great advantage in cross-country studies (Claessens & Laeven, 2004).

However, PRH model has some shortcomings. It is sensitive to monopsony power (Neon, 2015). Monopsony power arises when a single buyer controls the market and dictates prices (Leon, 2015). PRH assumes that, inputs should be homogenous and their prices exogenously fixed. Meanwhile, the price of deposits is always not fixed. It is possible for a bank to behave as a monopsony when alternative savings products are not available. In which case, monopsony power will lead to higher values of H-statistic and hence mask any market power present on the output side (Shaffer, 2004). Another drawback related with PRH model has to do with the continuous nature of H-statistics. The model assumed that, the H-statistics is a continuous monotonic index. However, critics of the model have argued that, H-statistics may be a continuum under certain conditions, but that may not be the case always.

H-statistics is estimated from reduced-form of bank revenue equations. It measures the sum of the elasticities of the total revenue of the banks with regards to the banks' input prices. H-statistics measures competition by assessing the extent to which a change in the factor input prices reflects in equilibrium revenues. The study followed the approach adopted by Fosu (2013) and Jeon et al. (2011) to calculate H-statistics by estimating the following reduced-form revenue equation:

$$\mathrm{In(Pit)} = \alpha + \beta 1 \mathrm{In(W1,it)} + \beta 2 \mathrm{In(W2,it)} + \beta 3 \mathrm{In(W3,it)} + \gamma 1 \ln(\Upsilon 1, \mathrm{it}) + \gamma 2 \ln(\Upsilon 2, \mathrm{it}) + \gamma 3 \ln(\Upsilon 3, \mathrm{it}) + \delta D + \varepsilon \mathrm{it} \quad \text{[Eqn 5]}$$

P_{it} - is the ratio of gross interest revenue to total assets (proxy for output price of loans)

$W_{1,it}$ - refers to the ratio of interest expense to total deposit as proxy for input price of deposits

$W_{2,it}$ - refers to the ratio of personnel expenses to total assets (proxy for input price of labour)

$W_{3,it}$ - refers to the ratio of other operating and administrative expenses to total fixed assets (proxy for input price of equipment / fixed capital). The model has a number of control variables as captured below;

$Y_{1,it}$ - is the ratio of equity to total assets (*EQTA*) proxy of bank's leverage

$Y_{2,it}$ - is the ratio of loans to total assets (*LTA*) account for credit risk exposure

$Y_{3,it}$ - is the total assets (*LTA*) to control for potential size effects

D - is a vector of year dummies

The subscript *i* denotes bank *i* and the subscript *t* denotes year *t*. H-Statistics is equal to $\beta_1 + \beta_2 + \beta_3$.

H-Statistics is interpreted as follows:

If H-statistic is zero or negative ($H \leq 0$), it indicates pure monopoly. This implies that an increase in factor prices leads to a fall in revenue. If the value of H-statistic is between zero and one ($0 < H < 1$), it indicates that banks are in a monopolistic competitive market. Under such a circumstance, an increase in factor prices increases average and marginal costs. If H-statistics is equal to 1 ($H=1$), it indicates perfect competition where there is free entry and exit. Hence, an increase in factor prices leads to a proportional increase in revenue.

4.2.7 Bank-specific control variables

It has been suggested that, studies that omit relevant economic variable(s) that predict(s) EC, SBD, FP and BRT could lead to wrong conclusions (Ntim, 2009). Accordingly, the study controls for the effect of variables, which have been identified in the extant literature to affect EC, SBD, FP and BRT. Specifically, a number of control variables capturing bank-specific features were employed. First, the study controls for bank size (FSIZ) measured as the logarithm of the total assets. Large banks may have stronger motive to engage in SBD activities (Kabir & Thai, 2017). In addition, they may be more equipped to deal with complicated, fast SBD strategies because they are more familiar with diversified operations (Kabir & Thai, 2017).

Further, because the public tend to scrutinize large banks more than smaller banks, large banks have stronger motivation to commit to SBD (Kabir & Thai, 2017). Also, large banks are

likely to maintain a better CG structures that will allow them to attract capital at a cheaper cost (Ntim, 2009). This can increase financial profitability and FP. Therefore, it is hypothesized that there is a positive relationship between firm size, as proxied by naturally logged total assets and, SBD and FP of banks. In particular, Delis (2012) posits that large banks have access to cheaper sources of capital owing to lower information asymmetries and superior risk-management capacities (Delis, 2012). The implication of these may be that firm size may have an impact on BRT (Delis, 2012).

Second, the study controls for leverage (LEV). Debt levels affect the behavior of managers by imposing discipline and encouraging them to make decisions that are in the best interest of the banks. It also shows management risk tolerance level that influences it attitude towards sustainable activities (Maqbool & Zameer, 2018). This is captured by the ratio of debt to total equity. From an agency perspective, Jensen (1986) posits that a higher level of debt can increase FP of banks. This is achieved through minimization of agency conflicts linked with having 'free cash flows' by opportunistic senior managers (Jensen, 1986).

Again, the use of debt financing can enhance FP by imposing extra monitoring by bondholders (Agrawal & Knoeber, 1996). In addition, from capital structure model, interest payments are tax deductible (Modigliani & Miller, 1963, p.438), and as such, all else equal, banks with more debt may generate higher FP. Similarly, debt levels affect the behavior of senior managers by imposing discipline and encouraging them to consider the broader interest of stakeholders (Maqbool & Zameer, 2018). This can increase SBD in the banking system. Therefore, the study expects a positive relationship between leverage as measured by ratio of debt to total assets to be positively linked with FP and SBD.

Third, the age (AGE) of the bank. Bank age is measured by the natural logarithm of the number of years since the bank's date of incorporation to the year of analysis, as management decisions and principles are rooted in time (Maqbool & Zameer, 2018). Also, it has been argued that board decisions and principles are deeply-rooted in time (Greiner, 1972). The study expects age to be positively associated with FP and SBD of banks in the region. In addition, it has been suggested that, older banks may appear to be safer considering that they might have been operating in the same market for a longer period, during which they have established good lending relationships with their customers. This may give such banks an advantage in terms of the information they possess (Mustapha & Toci, 2018). The study expects age to be negatively associated with BRT in the region.

Fourth, the ratio of liquid assets divided by total assets to control for bank liquidity (LIQ). Because liquid banks tend to charge low interest rates on loans, default rate tend to be low and

such banks also attract less risky projects (Mustapha & Toci, 2018). Thus, the study expects liquidity to be negatively associated with BRT in the ESSA region.

Fifth, capitalization (CAP) measured by the ratio of capital to total assets. Better-capitalized banks should provide more SBD to reduce the information asymmetry between the bank and external stakeholders. The study argues that banks that have higher capitalization will engage in more SBD initiatives as a credible means of minimising the probable information asymmetry between the bank and external shareholders. Also, it is expected that, better-capitalized banks will have higher FP than banks with low capitalization due to the access of cheap source of capital in better-capitalized banks. Again, the BRT behavior of banks considerably depends on the amount of equity held by the bank (Mustapha & Toci, 2018). Banks with high capital ratio tend to be conservative in risk-taking as a way of preserving shareholders value (Mustapha & Toci, 2018).

Sixth, it has been argued that level of external auditor independence and the quality of the audit are closely linked with the audit firm (e.g., Ntim, 2009). It can be inferred that, on average, bigger audit firms may have the capacity to resist senior managers of banks pressure in conflict circumstances. This stems from the resources (e.g., financial, employees, information and knowledge), and independence capabilities that bigger audit firms have over their smaller audit firms (e.g., Young et al., 2008). The study therefore expects a positive relationship between audit firm size and SBD, as well as FP but a negative association with BRT. A dummy that takes '1' if a bank is audited by a big four audit firm (PricewaterhouseCoopers, Deloitte & Touche, Ernst & Young, and KPMG), '0' otherwise.

Seventh, research and development (R&D) expenditure is considered to be essential control variable for assessing the impact of EC on SBD (Nollet et al., 2016). Several studies indicate that investments in research and development has effect on SBD (e.g., Ntim & Soobaroyen, 2013; Jo & Harjoto, 2012). Therefore, failing to control for R &D expenses may lead to a mis-specified equation in which case the coefficient on SBD may be biased upwards. Again, R&D is also one crucial control variable for examining the impact of SBD on FP (Nollet et al., 2016). For example, a number of studies suggest that investment in R&D has an impact on FP (Jo & Harjoto, 2012); thus, failing to control could result in a misspecified equation with the coefficient on the SBD being biased upwards.

Eighth, the study controls for other CG variables such as board size (BSIZE), the log of board members of the bank is used to control for the size of the board (Devita & Luo, 2018; Don et al., 2017), board gender diversity (BDIVG), the share of female executives on the board to control for board diversity. Finally, the study included year and country dummies to account

for fixed effects in line with prior studies (e.g., Haque & Ntim, 2020; Maqbool & Zameer, 2018; Kabir & Thai, 2017).

4.3 Empirical specification

This section will provide empirical specifications adopted to examine the association among CGI, EC, SBD, competition and BRT in the ESSA countries. Section 4.3.1 will provide the empirical specification concerning the association among CGI, EC and SBD. In section 4.3.2, the empirical specification on association among CGI, SBD and FP is discussed, whilst section 4.3.3 presents the empirical specification employed in investigating the association among board attributes, ownership structures, competition and BRT.

4.3.1 Empirical specification on the association among CGI, EC and SBD

Following prior banking studies Zhou et al. (2019) and D'apolito et al. (2019), and to address the first research question (i.e., whether bank-level CG disclosure index influences executive compensation (*H1a-H1c*), the model below is proposed and tested using the ordinary least square (OLS) regression technique initially.

$$EC_{it} = \alpha_0 + \beta_1 CGI_{it} + \beta_2 FSIZ_{it} + \beta_3 LEV_{it} + \beta_4 AGE_{it} + \beta_5 CAP_{it} + \beta_6 AFS_{it} + \beta_7 R\&D_{it} + \beta_8 YDU_{it} + \beta_9 CDU_{it} + \varepsilon_t \quad \text{[Eqn 6]}$$

Where CGI is the CG disclosure index. EC denote executive compensation measures, depending on the specification, which is either EPAY, NPAY or TPAY. The set of variables being controlled for, namely, firm size (FSIZ), leverage (LEV), age (AGE), capitalization (CAP), audit firm size (AFS), research and development (R & D), year dummies (YDU) and country dummies (CDU).

Further, this study follows D'apolito et al. (2019) and, Kartadjumena and Rodgers (2019) banking studies, to answer the supplementary research question: does EC impacts on SBD with an initial OLS regression model to specifically test *H2a* to *H2f* as structured below:

$$SBD_{it} = \alpha_0 + \beta_1 EPAY_{it} + \beta_2 NPAY_{it} + \beta_3 TPAY_{it} + \beta_4 FSIZ_{it} + \beta_5 LEV_{it} + \beta_6 AGE_{it} + \beta_7 CAP_{it} + \beta_8 AFS_{it} + \beta_9 R\&D_{it} + \beta_{10} YDU_{it} + \beta_{11} CDU_{it} + \varepsilon_t \quad \text{[Eqn 7]}$$

Where SBD_{it} is the sustainable banking disclosure score, which depending on the specification is either the aggregate SBD index or its six sub-indices (ENV, SOC, HAS, EHR, CIV and EMP) for bank *i* at time *t*. EC_{it} denote executive compensation measures, depending

on the specification, which is either EPAY, NPAY or TPAY. Bank-specific control variables include FSIZ, LEV, AGE, CAP, AFS and R&D. ε_{it} refers to the error term.

Finally, the study hypothesizes that the SBD of a bank is affected jointly by its CGI and its EC. To investigate this, the study adopts Haque and Ntim (2020), and D'apolito et al. (2019) studies in the non-financial sector in estimating the moderating effect of CGI on the pay-for-sustainability sensitivity as shown in Eq. (8). The study adopts this based on banking sample. Specifically, to examine *H3a-H3b* (whether CGI can moderate the pay-for-sustainability sensitivity), the study creates an interaction variable by multiplying the CGI and EC as follows: CGI times EPAY (CGI*EPAY), CGI times NPAY (CGI*NPAY) and CGI times TPAY (CGI*EPAY). Similarly, the model contains the same bank-specific control variables that were included in Eq. (6). The next model is as follows:

$$\mathrm{SBD}_{it} = f\begin{pmatrix} \mathrm{CGI}_{it} \\ \mathrm{EC}_{it} \\ \mathrm{CGI}_{it} * \mathrm{EC}_{it} \end{pmatrix} + \mathrm{CONTROLS}_{it} \qquad \text{[Eqn 8]}$$

Where $\mathrm{CGI}_{it} * \mathrm{EC}_{it}$is the interaction variable between EC and CGI. All other variables remain same as specified in equation (6).

4.3.2 Empirical specification on the association among CGI, SBD and FP

Following Memon et al. (2019) and, Ashraf et al. (2017) studies in an emerging banking sector, and to answer the first research question (i.e., whether bank-level CG disclosure influences corporate sustainability disclosures (*H4a* to *H4g*), the following model is proposed and tested using the ordinary least square (OLS) regression technique initially.

$$\mathrm{SBD}_{it} = \alpha_0 + \beta_1 \mathrm{CGI}_{it} + \beta_2 \mathrm{FSIZ}_{it} + \beta_3 \mathrm{LEV}_{it} + \beta_4 \mathrm{AGE}_{it} + \beta_5 \mathrm{CAP}_{it} + \beta_6 \mathrm{AFS}_{it} + \beta_7 \mathrm{R\&D}_{it} + \beta_8 \mathrm{YDU}_{it} + \beta_9 \mathrm{CDU}_{it} + \varepsilon_t \qquad \text{[Eqn 9]}$$

Where CG disclosure aggregate index is CGI. SBD denote sustainable banking measures, depending on the specification, which is either SBD, ENV, SOC, HAS, CIV, EHR or EMP. The set of variables being controlled for, namely, firm size (FSIZ), leverage (LEV), age (AGE), capitalization (CAP), audit firm size (AFS), research and development (R & D), year dummies (YDU) and country dummies (CDU).

Second, this study follows Szegedi et al. (2020) and Platonova et al. (2018) studies in the banking sector, to answer the supplementary research question: does SBD impacts on FP with an initial OLS regression model to specifically test *H5a* to *H5g* as structured below:

$$FP_{it} = \alpha_0 + \beta_1 SBD_{it} + \beta_2 FSIZ_{it} + \beta_3 LEV_{it} + \beta_4 AGE_{it} + \beta_5 CAP_{it} + \beta_6 AFS_{it} + \beta_7 R\&D_{it} + \beta_8 YDU_{it} + \beta_9 CDU_{it} + \varepsilon_t \quad \text{[Eqn 10]}$$

Where SBD_{it} is the corporate sustainability disclosure score, which depending on the specification is either the aggregate SBD index or its six sub-index (ENV, SOC, HAS, EHR, CIV and EMP) for bank *i* at time *t*. FP_{it} denote FP measures, depending on the specification which is either ROA or ROE. Bank specific control variables include FSIZ, LEV, AGE, CAP, AFS and R&D. ε_{it} refers to the error term.

Finally, the study hypothesis that the FP of a bank is affected jointly by its CGI and SBD. This study follows a number of studies (D'apolito et al., 2019; Kartadjumena & Rodgers, 2019; Maqbool & Zameer, 2018) in the banking sector in estimating the moderating effect of CGI on the sustainability-for-performance sensitivity as shown in Eq. (11). Specifically, to examine *H6* (whether CG disclosure index can moderate the sustainability-for-performance sensitivity), the study creates an interaction variable by multiplying the bank-level CGI and SBD as follows: CGI times SBD (CGI*SBD). The study controls for all the variables included in Eq. (9) in estimating the next model, which is stated below:

$$FP_{it} = f\begin{pmatrix} CGI_{it} \\ SBD_{it} \\ CGI_{it} * SBD_{it} \end{pmatrix} + CONTROLS_{it} \quad \text{[Eqn 11]}$$

Where CGI_{it}*$SBD_{it}$is the interaction variable between SBD and CG. All other variables remain same as specified in equation (9).

4.3.3 Empirical specification on the association among CG, competition and BRT

First, to investigate the first research question (whether CG structures influence BRT (*H7-H8*), the model below is suggested. Following prior research, the model is first analyzed by employing ordinary least square (OLS) regression approach (Hunjra et al., 2020; Zhou et al., 2019; D'apolito et al., 2019; Felício et al., 2018; Lestari, 2018):

$$BRT_{it} = \alpha_0 + \beta_1 InEXPERT_{it} + \beta_2 InNBMs_{it} + \beta_3 InINSONR_{it} + \beta_4 GOVNR_{it} + \beta_5 InFONR_{it} + \beta_6 CONT_{it} + \varepsilon_{it} \quad \text{[Eqn 12]}$$

Where: BRT is the dependent variable measured using Z-score, non-performing loans (NPLs), loan loss provision (LPROV) and capital adequacy ratio (CAR); EXPERT (independent financial experts), NBMs (number of board meetings), ISONR (institutional ownership), GOVNR (government ownership), FONR (foreign ownership), are the main explanatory variables; and CONT denotes the set of variables being controlled for, including, board size (BSIZE), board gender diversity (BDIVG), firm size (FSIZ), capitalization (CAP), age (AGE), liquidity (LIQ), country (CDU) and year (YDU) dummies.

Second, prior banking literature employs a number of a methods to assess the influence of competition on BRT. This include ordinary least squares (see Goetz, 2017; Tabak et al., 2012); pooled OLS (see Mohammed et al., 2015; Zhang et al., 2013) and fixed-effect GLS method (e.g., Liu et al., 2012). In order to endogeneity problems associated with the above methods, others such as Soedarmono et al. (2013) use 2SLS approach, whereas Amidu and Wolfe (2013) employs 3SLS approach. However, following recent banking literature on competition and BRT (e.g., Moudud-Ul-Huq, 2020; Tongurai & Vithessonthi, 2020; Akande et al., 2018), the study adopts dynamic panel generalized method of moments (GMM) to examine the influence of competition on BRT in ESSA banks. This is because dynamic GMM approach is a superior model that is able to resolve econometric issues such as unobserved heterogeneity. The GMM approach is also able to fix problems such as dynamic endogeneity and simultaneity (Wintoki et al., 2012).

In particular, Wintoki et al. (2012) recommends that, researchers exploring the competition-BRT relationship to adopt choose dynamic GMM model over conventional ordinary least squares and fixed effects methods due to the following strengths of the approach. Importantly, and unlike the ordinary least squares approach, dynamic GMM technique is capable of capturing fixed-effects at the individual bank levels. The implication is that, dynamic GMM estimator sufficiently fix any probable endogeneities originating from unnoticed bank-specific heterogeneities. Next, it is distinct and superior to conventional fixed effects approach which considers active exogeneity. Conventional fixed effects suffer from autocorrelation and hetereoscedascity between present and previous values. However, the GMM technique allows present values of the independent variable in this case competition to be influenced by previous values of the dependent variable in this case BRT.

Again, conventional ordinary least squares and fixed effects approaches have shortcomings in the economic structure and processes fundamental to the generation of the variables.

However, the GMM technique has the capacity to overcome these weakness as it is dynamic. By way of illustration, when present values of bank competition variables are linked with previous values of BRT, a dynamic GMM approach has the capacity to employ the previous values of BRT and competition variables as valid instruments. This is crucial as it helps to sufficiently address the presence of any probable dynamic and simultaneous endogeneities. Finally, one important strength GMM approach over OLS and fixed-effects is that, GMM depends on internal instruments obtained from past values BRT and competition variables in the estimation of the relationship. Importantly, this removes the cumbersome problems related with searching for valid external instruments (e.g., Ntim et al., 2015; Wintoki et al., 2012). Accordingly, to test *H12* (to offer insight about the additional research question: whether competition influences bank risk-taking), the following model is proposed and tested using the GMM technique as applied in prior studies (e.g., Akande eat al., 2018; Delis et al., 2016).

$$BRT_{it} = \sigma_{it} + \lambda_{it-1} + \pi_{it} LI_{it} + \phi_{it} \Sigma X_{it} + \upsilon it \qquad \text{[Eqn 13]}$$

Where BRT_{it} denotes measures of BRT for bank *i* at year *t*. The BRT indicators are the Z-score, NPLs, LPROV and CAR. σ_{it} is a constant; π_{kit} is the coefficient competition measures, *LI*, competition is measured either as Lerner index or H-statistics; ϕ_{it} denotes coefficient of the vector of bank-specific variables; and vit is the error term.

As indicated earlier, to address endogeneity and reverse causality concerns, the GMM estimation advanced by Blundell and Bond (1998) is adopted (Coldbeck & Ozkan, 2018; Akande et al., 2018). The reliability of the GMM estimation is contingent how valid the instruments employed are. Importantly, it is desirable to have no high order serial correlation in the idiosyncratic element of the error term (Coldbeck & Ozkan, 2018). Initially, the Hansen J-statistics of over-identifying restrictions is used to detect presence of any source of correlation between the instruments and the error term (Coldbeck & Ozkan, 2018). This tests for the null hypothesis of overall validity of the instruments to be employed. In order to examine the strength of the instruments used, two additional tests are carried out to check the existence of first and second order serial correlation in the first-differenced residuals (AR1 and AR2) as applied by Coldbeck and Ozkan (2018).

Specifically, the study follows recent finance studies by estimating Eq. (13) using dynamic panel GMM technique (e.g., Tongurai & Vithessonthi, 2020; Coldbeck & Ozkan, 2018). The study estimates the two-step dynamic GMM model. Following previous research, this study uses the first differences of the two-period lagged values of the same independent variables as instruments (e.g., Tongurai & Vithessonthi, 2020; Akande et al., 2018).

Table 4.4: Variables definitions

Variable	Abbreviation	Description	Source
Panel A Dependent variables			
Financial performance	FP		Bankscope
Return on assets	ROA	Percentage of operating profit to total assets	Bankscope
Return on equity	ROE	Ratio of net income to shareholder's equity	Bankscope
Sustainable banking disclosure	SBD	A SBD index covering six broad areas as set out by 2016 GRI's reporting guidance on SBD; Environmental score (ENV) 21 disclosures; Social investment and service quality (SOC) 27 disclosures; health and safety (HAS) 40 disclosures; community involvement (21); ethics and human rights (EHR) 12 disclosures; and employee (EMP) disclosures 14. Each disclosure ranges from 0 to 4 (where 0-no disclosure; 1-general or rhetorical disclosures; 2-narrative of what has been achieved; 3-quantitative or monetary data disclosure; 4-quantitative or monetary disclosure supported by explicit assessment of performance or events. The results are scaled to a value between 0 and 100%.	Annual report
Executive compensation	EC		Annual report
Executive directors pay	EPAY	Natural log of annual cash (i.e., cash-bonus, salary and other reported cash remuneration) pay of all executive directors scaled by the total number of executive directors in a financial year	Annual report
Non-executive directors pay	NPAY	Natural log of annual cash (i.e., cash-bonus, salary and other reported cash remuneration) pay of all non-executive directors scaled by the total number of non-executive directors in a financial year	Annual report
Total directors pay	TPAY	Natural log of annual cash (i.e., cash-bonus, salary and other reported cash remuneration) pay of all executive and non-executive directors scaled by the total number of executive and non-executive directors in a financial year	Annual report
Bank risk-taking	BRT		
Z-score	Z-score	Banks' return on assets plus the equity asset ratio divided by the standard deviation of asset returns	BankScope
Non-performing loans	NPLs	The bank-level ratio of non-performing loans to total loans; a larger value indicates a riskier loan portfolio	Annual report
Loan- loss provision	LPROV	It is measured by the ratio of loan loss provision to total loans	Annual report
Capital adequacy ratio	CAR	Ratio of banks capital to risk weighted assets	Annual report
Panel B independent variable			
CG disclosure index	CGI	CG index containing 100 provisions derived from the commonwealth CG code, individual country CG codes and annual report of the sampled banks. The CG provision take a value of 1 if is disclosed in the annual report, otherwise 0 and scaled to a value between 0% and 100%.	Annual report
Interaction variables	INT		Annual report
TPAY*CGI variable	INT1	TPAY*CGI denotes the interaction variable between the CGI and total executive and non-executive directors pay	Annual report
EPAY*CGI variable	INT2	EPAY*CGI denotes the interaction variable between the CGI and total executive directors pay	Annual report

NPAY*CGI variable	INT3	NPAY*CGI denotes the interaction variable between the CGI and non-executive directors pay	Annual report
CGI*SBD	INT4	CGI*SBD denotes the interaction variable between the CGI and sustainable banking disclosure score	Annual report
Competition measures	COMP		Bankscope
Lerner indicator	LERNER	Lerner index is the ratio of mark up (difference between output price and marginal cost) to the output price. The index ranges from 0 to 1, with higher values indicating more market power.	Bankscope
Panzar-Rosse H-statistics	HSTAT	PRH is the sum of the elasticities of the revenue with respect to all input prices.	Bankscope
Board characteristics			Annual report
Financial expertise	EXPERT	Percentage of independent financial experts on the board	Annual report
Number of board meetings	NBMs	The natural logarithm of the total number of board meetings in a year	Annual report
Bank ownership characteristics			Annual report
Institutional ownership	INSONR	The percentage of shared owned by institutions in the banks	Annual report
Government ownership	GOVNR	The percent of shared owned by government in the banks	Annual report
Foreign ownership	FONR	The percentage of shares owned by foreigners	Annual report
Panel C: Bank control variables			
Firm size	FSIZ	Natural logarithm of total assets of the bank	Bankscope
Leverage	LEV	Ratio of total debt to total assets	Bankscope
Age	AGE	Natural log of the number of years since inception	Annual report
Liquidity	LIQ	Liquid assets divided by total assets	Bankscope
Capitalization	CAP	Equity capital divided by total assets	Bankscope
Audit firm size	AFS	1 if a bank is audited by the big four audit firm (PricewaterCoopers, Deloitte & Touche, Ernest & Young and KPMG), 0 otherwise.	Annual report
Research and development	R&D	Natural logarithm of research and development cost of the bank scaled by total assets	Bankscope

Notes: This table provides the definitions of the main variables employed in the analysis

4.4 Descriptive statistics

This section presents the descriptive statistics of the variables used in investigating the association among CGI, EC, SBD, FP and BRT in the ESSA banks. First, Table 4.5 presents the descriptive statistics of all the variables used in the analysis of the association among CGI, EC, SBD and FP. To remove the influence of outliers, all variables are winsorized at the 5 percent level.

Table 4.5: Descriptive Statistics of all variables for all the 2027 bank years

Variable	Mean	Median	Std. Dev.	Minimum	Maximum
Panel A: Financial performance					
ROA	2.90	1.87	0.06	-6.46	92.20
ROE	16.97	14.30	0.16	-1.23	98.83
Panel B: SBD variables					
SBD Index (%)	34.25	33.89	9.37	6.11	61.11
ENV (%)	37.58	34.52	17.02	2.38	82.14
SOC (%)	34.76	34.26	14.29	3.70	75.00
HAS (%)	22.87	21.25	9.13	1.88	51.88
EHR (%)	38.53	35.42	16.79	2.08	83.33
CIV (%)	39.13	40.48	13.98	1.13	69.05
EMP (%)	50.31	50.00	12.70	3.57	75.00
Panel C: Compensation variables					
TPAY ($m)	5.67	0.31	31.13	0.05	151.19
EPAY ($m)	2.04	0.15	8.23	0.01	80.21
NPAY ($m)	3.63	0.07	29.93	0.01	64.98
Panel D: CGI					
CGI (%)	64.56	66.00	13.96	23.00	88.00
Panel E: Interaction variables					
TPAY*CGI	279.04	241.11	21.35	9.05	2146.80
EPAY*CGI	148.60	107.70	17.50	4.10	794.51
NPAY*CGI	126.76	101.50	14.60	6.07	805.75
SBD*CGI	2245.73	2146.48	18.70	244.44	4742.22
Panel F: Control variables					
FSIZ ($m)	9.52	9.11	2.92	2.35	17.26
CAP	0.20	0.13	0.32	0.02	0.99
LEV	0.84	0.86	0.11	0.03	0.95
AGE	36.00	26.00	29.96	2	178
R & D ($m)	2.22	1.57	2.49	4.61	10.15
AFS	0.92	1.00	0.27	0	1

*This tables provides the summary statistics of all the variables used in the regression analysis. Variables are defined as follows: Return on Assets (ROA); Return on Equity (ROE), Sustainable Banking Disclosure (SBD), Environmental score (ENV), Social investment and service quality score (SOC), Health and safety score (HAS), Community involvement score (CIV); Ethics and human rights score (HER), employee score (EMP), Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY), corporate governance disclosure index (CGI), an interaction between TPAY and CGI (TPAY*CGI), an interaction between EPAY and CGI (EPAY*CGI), an interaction between NPAY and CGI (NPAY*CGI), an interaction between SBD and CGI (SBD*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4*

Second, Table 4.6 presents the descriptive statistics of all the variables used in the analysis of the association among board attributes, bank ownership variables, competition and BRT. Similarly, and to remove the influence of outliers, all variables are winsorized at the 5 percent level.

Table 4.6: Descriptive Statistics of all variables for all the 2027 bank years

Variable	Mean	Median	Std. Dev.	Minimum	Maximum
Panel A. Dependent variable					
Z-score	0.610	0.26	0.980	0.030	2.42
NPLs	5.17	2.30	9.07	0	68.00
CAR	18.53	16.90	9.59	-13.00	136.40
LPROV	1.52	0	3.26	0	37.00
Panel B. Competition variables					
Lerner index	0.37	0.36	0.28	0.13	0.61
H-statistics	0.48	0.42	0.67	0.07	0.89
Panel C. Board variables					
EXPERT (%)	58.23	57.14	14.77	10.00	88.83
NBMs (%)	4.98	5.00	1.46	2.00	12.00
Panel D. Ownership variables					
ISONR (%)	75.54	92.66	18.51	11.78	100.00
GOVNR (%)	5.46	35.10	20.08	0.00	100.00
FONR (%)	17.62	21.69	7.77	0.00	42.07
Panel F. Bank control variables					
BSIZE	9.00	9.00	3.19	4.00	24.00
BDIVG (%)	24.79	25.00	13.45	0.00	83.33

This tables provides the summary statistics of all the variables used in the regression analysis. Variables are defined as follows: Z-score (Z-score), Non-performing loans (NPLs), Capital Adequacy Ratio (CAR), Loan Loss Provision (LPROV), Independent directors who are financial experts (EXPERT), Number of board meetings (NBMs), Institutional ownership (ISONR), Government ownership (GOVNR), Foreign ownership (FONR), board size (BSIZE) and Board Gender Diversity (BDIVG). Full definitions of variables used are provided in Table 4.4.

4.5 Correlation diagnostic

This section presents the correlation matrix of the variables used in investigating the association among CGI, EC, SBD, FP and BRT of banks in the ESSA region. First, the study presents the correlation coefficients of Pearson matrix of all the variables used in the analysis of the association among CGI, EC, SBD and FP. Specifically, Table 4.7 provides the correlation matrix of all variables used in the regression analysis. As a rule of thumb, a correlation of 0.7 or higher in absolute value may suggest a multicollinearity issue (Liu et al., 2014). Further, if the correlation coefficient between the explanatory variables is greater than 0.80, there is an indication of major multicollinearity (Guajarati, 1995). The results in Table 4.7 show that, there is statistically significant correlation between the dependent variables and the explanatory variables, as well as the bank-specific control variables.

Table 4.7: Pearson's correlation matrices of the variables for CGI, EC, SBD and FP for the 2027 bank year observations

Variable	ROA	ROE	SBD	ENV	SOC	HAS	EHR	CIV	EMP	TPAY	EPAY	NPAY	CGI	INT1	INT2	INT3	FSIZ	LEV	CAP	AGE	AFS	R&D
ROA	1.00																					
ROE	0.43	1.00																				
SBD	0.03**	0.03*	1.00																			
ENV	-0.06**	-0.02	0.08*	1.00																		
SOC	0.08***	0.09*	0.08*	0.03	1.00																	
HAS	-0.04***	-0.01	0.07*	0.32*	0.05	1.00																
EHR	-0.06**	0.03*	0.07*	0.07	0.03	0.04*	1.00															
CIV	-0.07**	-0.04**	0.06*	0.03	0.03*	0.05	0.04	1.00														
EMP	-0.02	0.05**	0.05	0.05*	0.04	0.02*	0.03*	0.18	1.00													
TPAY	0.03**	0.05**	-0.05***	0.01*	-0.07**	-0.06**	-0.01	-0.11***	0.08***	1.00												
EPAY	0.01*	0.06***	0.01***	0.02*	0.02*	0.04**	0.01	0.08***	0.14***	0.08	1.00											
NPAY	-0.04*	-0.07*	-0.01***	-0.05**	-0.08**	-0.05**	-0.05**	-0.13***	-0.01*	0.03	0.25	1.00										
CGI	0.05***	0.03*	0.14***	0.07***	0.11***	0.16**	0.03***	0.12***	0.16***	-0.02**	-0.07**	-0.11**	1.00									
INT1	0.07*	0.03***	-0.02	-0.001	-0.03	-0.02*	-0.13*	0.061	-0.07	0.002	0.01	0.03	0.007	1.00								
INT2	0.01**	0.04**	0.05***	0.10**	0.07**	0.004**	0.08**	0.03*	0.006**	0.001	0.03	0.04*	0.05*	0.15	1.00							
INT3	0.06*	0.08**	0.01**	0.04*	0.14	0.19*	0.18*	0.07**	0.12*	0.06	0.04	0.09	0.05	0.11	0.07	1.00						
FSIZ	-0.04**	-0.01*	-0.09**	-0.01**	-0.08**	-0.09**	-0.04*	-0.17**	0.08***	0.07**	0.06**	0.16**	-0.02	0.06	0.04	0.11	1.00					
LEV	-0.11	0.01**	0.01	0.03	-0.03*	-0.03	0.04**	0.01	0.05**	-0.08	-0.09*	-0.05	0.11*	-0.09	0.27	0.08*	0.04	1.00				
CAP	0.31***	-0.14**	-0.10	-0.14**	-0.03*	-0.04**	-0.12**	-0.11**	0.09***	0.10**	0.07**	0.06*	-0.05*	0.07	0.41	-0.05	-0.10	-0.06	1.00			
AGE	0.06***	0.08***	0.12***	0.03	0.15***	0.10***	0.04**	0.12***	0.16***	0.17*	0.06**	0.04**	0.02	0.04	0.05	0.08*	0.14	0.01	0.08	1.00		
AFS	-0.06**	0.01**	0.08***	0.03*	0.08***	0.08***	0.03	0.02	0.06**	0.02	0.02	0.03*	0.03	0.33	0.08	0.21*	0.06	0.01	-0.01	-0.02	1.00	
R&D	0.01**	0.01**	0.02	0.08***	0.02	0.02	0.02	0.03*	0.10***	0.04**	0.01***	0.06***	0.04*	0.06	0.09*	0.18*	0.06	0.11	-0.10	0.20*	-0.08*	1.00

Notes: The figures indicate the Pearson's correlation coefficients. ***, ** and * indicate that the correlation is respectively significant at 1%, 5% and 10% levels. *Return on Assets (ROA); Return on Equity (ROE), Sustainable Banking Disclosure (SBD), Environmental score (ENV), Social investment and service quality score (SOC), Health and safety score (HAS), Community involvement score (CIV); Ethics and human rights score (EHR), employee score (EMP), Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY), corporate governance disclosure index (CGI), an interaction between TPAY and CGI (TPAY*CGI), an interaction between EPAY and CGI (EPAY*CGI), an interaction between NPAY and CGI (NPAY*CGI), an interaction between SBD and CGI (SBD*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4*

The correlation between the independent variable, financial performance (return on asset and return on equity) and dependent variables (corporate governance disclosure index and sustainable banking disclosure score) are mostly significant at conventional levels. In addition, they also have the expected signs. For example, correlation coefficients in Table 4.7 indicate statistically strong associations among the FP (return on assets and return on equity) and sustainable banking disclosure scores. For instance, the findings suggest that banks with higher sustainable banking disclosure scores have significantly higher financial performance. In addition, the CG variable (CGI) is negatively and significantly correlated with the executive compensation measures (EPAY, NPAY and TPAY). The correlation among the independent variables are relatively low and statistically insignificant. A weak correlation of the independent variables is desirable since it suggests that multicollinearity is not a major problem (Liu et al., 2014). Overall, the results in Table 4.7 show that all the correlation coefficients have absolute values lower than 0.7.

Next, Table 4.8 presents the correlation matrix of of all the variables used in the analysis of the association among board attributes, bank ownership variables, competition and BRT. This analysis was carried out to detect if there any serious probable multicollinearity challenges. It has been suggested that, an absolute correlation of 0.7 or above will infer the presence of multicollinearity issue (Liu et al., 2014). The findings captured in Table 4.8 reveal that all the correlation coefficients have absolute values that are less than 0.7. This evidence confirms the absence of any major multicollinearity issues (Elmagrhi et al., 2020; Liu et al., 2014).

Also, Table 4.8 findings reveal that, the board attributes are negatively associated with the bank risk-taking variables. For instance, the EXPERT has a negative and significant correlation with Z-score, NPLs, CAR and LPROV. The table suggests significant correlation between the ownership structures and bank risk-taking variables. For example, ISONR has negative and significant correlation with all of the bank risk-taking measures except CAR.

Finally, the table shows that the correlations between competition and bank risk-taking variables significant and positive. For example, there is a positive and significant correlation between the two competition measures (Lerner index and H-statistics) and the four proxies of bank risk (Z-score, NPLs, CAR and LPROV).

Table 4.8: Pearson's correlation matrices of the variables for CG, competition and BRT for the 2027 bank year observations

Variable	Z-score	NPLs	CAR	LPROV	LERNER	H-STA	BSIZE	EXPERT	BDIVG	NBMs	INSONR	GOVNR	FONR	CAP	FSIZ	LIQ	AGE
Z-SORE	1																
NPLs	0.03	1															
CAR	-0.03	0.12	1														
LPROV	0.18	0.32	-0.25	1													
LERNER	0.02**	0.03**	0.02**	0.12**	1												
H-STA	0.05**	0.04***	0.14*	0.03*	0.001												
BSIZE	0.04**	0.03*	-0.10*	0.11	-0.05**	1 -0.02*	1										
EXPERTS	-0.08**	-0.01*	-0.04*	-0.09**	-0.05**	0.03**	0.05**										
BDIVG	-0.006**	-0.09*	0.05*	0.06*	-0.04**	-0.05**	0.05**	1 0.1	1								
NBMs	-0.03***	-0.05*	-0.08*	-0.026*	-0.01	-0.02*	0.06*	0.06*	0.05	1							
INSONR	-0.009*	-0.008*	-0.03	-0.02*	-0.07	-0.04*	-0.03	-0.03	-0.02	-0.01	1						
GOVNR	0.04**	0.02	0.17**	0.03	0.01	-0.004*	-0.007	-0.02	-0.03	-0.005	-0.009	1					
FONR	0.01	0.06*	0.06*	0.06**	-0.07**	-0.03*	-0.03	-0.03	-0.02	-0.009	0.09	-0.02	1				
CAP	-0.01	-0.05**	0.02*	-0.18*	0.04	0.007**	-0.04*	0.02	-0.04	0.005	-0.005	-0.004	0.13	1			
FSIZE	-0.01***	-0.03**	-0.02*	-0.19*	0.03	0.05*	-0.02	0.06*	0.035	-0.02	0.02	-0.02	0.03	-0.02	1		
LIQ	0.07***	0.03*	0.02*	0.04*	-0.01	-0.01*	-0.002	-0.007	0.01	0.001	-0.001	-0.02	-0.004	-0.08	0.02	1	
AGE	0.02**	0.02**	0.06**	0.03*	0.01	0.00	-0.01	0.03	0.03	-0.00	0.03	0.05	0.03	-0.08	0.02	0.01	1

*Notes: The figures indicate the Pearson's correlation coefficients. ***, ** and * indicate that the correlation is respectively significant at 1%, 5% and 10% levels. Variables are defined as follows: Z-score (Z-score), Non-performing loans (NPLs), Capital Adequacy Ratio (CAR), Loan Loss Provision (LPROV), Independent directors who are financial experts (EXPERT), Number of board meetings (NBMs), Institutional ownership (ISONR), Government ownership (GOVNR), Foreign ownership (FONR), board size (BSIZE) and Board Gender Diversity (BDIVG). Full definitions of variables used are provided in Table 4.4.*

Chapter 5

5 Empirical results of the association among CGI, EC and SBD

This chapter focuses on providing empirical results on the association among corporate governance disclosure index, executive compensation and sustainable banking disclosures in the ESSA banks. Specifically, section 5.1 provides the results on the association between corporate governance disclosure index and executive compensation. In section 5.2, the study presents the results on the impact of executive compensation on sustainable banking disclosures. Finally, section 5.3 provides the findings on the moderating effect of corporate governance disclosure index on the pay-for-sustainability sensitivity in the ESSA banks.

5.1 The empirical findings of effect of CG disclosure on executive compensation

Table 5.1 provides the results of the effect of CG disclosure index (CGI) covering 100 main components obtained from the regional Combined CG Code provisions on executive compensation (EC) in ESSA banks as captured in Eq. (6).

Table 5.1: The effect corporate governance disclosure index and executive compensation with clustered errors

Dependent Variable	TPAY	EPAY	NPAY
Model	(1)	(2)	(3)
Independent variables			
CGI	-0.008***	-0.013***	-0.165***
	(2.970)	(4.295)	(3.356)
Bank-level controls			
FSIZ	0.313***	0.374***	1.605***
	(21.502)	(20.197)	(4.978)
LEV	-0.624*	-0.054	10.697
	(1.804)	(0.124)	(1.399)
AGE	0.083**	0.210***	0.717***
	(2.137)	(4.284)	(2.839)
CAP	0.099	0.530**	6.608*
	(1.594)	(2.508)	(1.793)
AFS	0.004	0.033	1.193
	(0.064)	(0.372)	(0.774)
R& D	0.377***	0.521***	1.685***
	(23.870)	(26.023)	(4.830)
Constant	1.348***	-2.754***	3.831***
	(3.413)	(5.493)	(4.387)
Year fixed effect	Yes	Yes	Yes
Country effect	Yes	Yes	Yes
No. of observations	2027	2027	2027
R-squared	0.672	0.641	0.678

*Notes: This table presents the OLS regression results on the effect CGI on EC. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY), corporate governance*

disclosure index (CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4

Precisely, Table 5.1 provides the results concerning the impact of CGI on the pay package of executives given by EPAY, NPAY and TPAY as the dependent variables. Prior research indicates that good internal CG mechanisms can reduce agency conflicts by enhancing managerial monitoring ability (Elmagrhi et al., 2020; Fama, 1980). This may prevent senior managers from misappropriating shareholders' wealth (Jensen & Meckling, 1976). In order to analyse this, the study investigates the effect of CGI on EC. The coefficients of CGI on TPAY, EPAY and NPAY (-0.008, -0.013 and -0.165) in Table 5.1 are all negative and statistically significant at 1%. Largely, the findings offer empirical support for *H1a*, *H1b* and *H1c*. This evidence supports the suggestion that banks that are better-governed tend to pay substantially lower level of compensation to their executives than banks that are poorly-governed in the ESSA region[3].

The inverse link between CGI and EC offers empirical support for the provisions of ESSA regional codes (e.g., Ghana SEC code, 2018; Nigeria SEC code, 2018; The Kings Report, 2016; Kenya CG code, 2016). In addition, the findings offer support to prior CG research (e.g., Elmagrhi et al., 2020; Newton, 2015; Jouber & Fakhfakh, 2012; Fahlenbrach, 2009). Theoretically, the evidence also offers empirical support for both MPH and OCT. The evidence suggests that under poor governance settings (MPH) senior managers of banks may dominate board decisions and award themselves with disproportionately substantial compensation packages (Elmagrhi et al., 2020; Ntim et al., 2015; Ozkan, 2007). In a weak governance banking environment, opportunistic senior managers may misappropriate the wealth of shareholders by having power in terms of setting their own compensation schemes (Cho et al., 2014; Shleifer & Vishny, 1997).

However, under good CG conditions (OCT), senior managers of banks have minimal control in terms of setting their own compensation packages. This provides the necessary platform for the board to structure compensation packages in such a manner that it ensures EC is more

[3] Standard errors can be clustered in a number of ways in regression models to take into consideration group effects (Al-Najjar, 2018; Al-Najjar & Clark, 2017). The regression models in the study are based on one-way clustering. These models have been adopted so to be consistent with previous CG studies in the ESSA context (see e.g., Siueia et al., 2019; Ibitamuno et al., 2018; Ghosh, 2017). Additionally, this was done in accordance with prior international CG studies (e.g., Abdelbadie & Salama, 2019; Nawaz, 2019; McGuinness, et al., 2017; Brick & Chidambaran, 2010). Nevertheless, the study also conducted an additional cluster based on firms with the inclusion of country dummies to determine the consistency of the findings. Although the results are not reported, no changes were reported in this analysis.

closely linked with the performance of senior managers of the bank (Elmagrhi et al., 2020; Dong, 2014; Edmans & Gabaix, 2009). The implication is that, this limits excessive executive compensation in the banking system.

Concerning the control variables, firm size and age have positive impact on EC, indicating that large and older banks pay higher level of compensation to their executive than small and newer banks. AFS seems to have insignificant effect on EC, whiles investments in research and development positively impact on EC. Leverage has insignificant link with the EC measures except in Model 1 where there is a negative and significant relationship. Similarly, CAP has positive association with EC measures except in Model 1 where the link is insignificant.

To further investigate the robustness of the results presented in Table 5.1 concerning the effect of the CGI on EPAY, NPAY and TPAY, the study divides the sample according to the mean value of internal CG disclosure index and re-estimate Eq. (6) in the sub-samples. Specifically, and in line with Elmagrhi et al. (2020) the study conducts this analysis in different sub-samples. This led to two groups: better-governed and poorly-governed banks. In the case of better-governed banks, the sub-sample contains banks with a CGI value over the average score of 64%. Similarly, for poorly-governed banks, sub-sample contains all banks with CGI value lower than the average score of 64%. This analysis was done to provide more informative inferences about the data (Elmagrhi et al., 2020). The results are provided in Table 5.2.

Table 5.2: Break sample analysis of the effect of corporate governance on executive pay with clustered errors

	Better-governed banks			**Poorly-governed banks**		
Dependent Variable	TPAY	EPAY	NPAY	TPAY	EPAY	NPAY
Model	(1)	(2)	(3)	(4)	(5)	(6)
CGI	-0.010**	-0.014**	-0.289***	-0.012	-0.018	-0.007
	(2.543)	(2.365)	(3.008)	(0.890)	(1.188)	(0.548)
Bank-level controls						
FSIZ	0.308***	0.389***	2.395***	0.297***	0.234***	0.197***
	(17.765)	(17.412)	(5.707)	(10.920)	(7.609)	(7.162)
LEV	-0.625	-0.141	-17.506	-0.825**	-0.136	-0.242
	(0.743)	(0.174)	(1.156)	(2.109)	(0.308)	(0.779)
AGE	0.159***	0.242***	0.589*	0.162*	0.268**	0.361***
	(3.649)	(4.293)	(1.839)	(1.754)	(2.572)	(3.865)
CAP	0.064	0.461*	-5.038*	0.169	1.055***	-0.242
	(0.317)	(1.779)	(1.646)	(0.552)	(3.040)	(0.779)
AFS	0.027	0.004	1.130	0.051	0.034	-0.125
	(0.349)	(0.036)	(0.599)	(0.330)	(0.196)	(0.807)
R& D	0.355***	0.515***	2.18***	0.492***	0.681***	0.173***
	(19.387)	(21.802)	(4.845)	(13.700)	(16.759)	(4.753)
Constant	2.642***	-3.781***	1.977***	1.100*	1.159*	1.108*
	(3.871)	(4.295)	(3.749)	(1.656)	(1.841)	(1.719)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes	Yes

Observations	1166	1166	1166	861	861	861
R-squared	0.663	0.623	0.676	0.735	0.757	0.604

*Notes: This table presents the OLS regression results on the effect CGI on EC. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY), corporate governance disclosure index (CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4*

Concerning better-governed banks, the coefficients of CGI on TPAY (-0.010), EPAY (-0.014) and NPAY (-0.289) are negative and statistically significant in all the models. In addition, the findings in Models 4 to 6 reveal that the coefficients of the CGI on TPAY (-0.012), EPAY (-0.018) and NPAY (-0.007) for poorly-governed banks are negative. However, the relationships are all not statistically significant, offering further empirical support for *H1a to H1c*.

The evidence suggests that well-governed banks pay significantly lower cash compensation to executive directors, non-executive directors, and all executive directors, than poorly-governed banks in the ESSA region. Importantly, the negative impact of corporate governance disclosure on executive compensation offers empirical support for the provisions of the Combined CG Code issued in the ESSA and the findings of prior CG studies in the non-financial sector (e.g., Elmagrhi et al., 2020). Theoretically, the evidence offers empirical support for both MPH and OCT, suggesting that in poor governance banking system senior managers of banks can influence the decision of the board and offer themselves with excessively generous compensation as suggested by MPH framework (Elmagrhi et al., 2020). However, in banking system with effective CG structures, senior managers do not have the power to determine their compensation as indicated by OCT perspective. Therefore, this can enable the board to structure efficient compensation incentives that may be consistent with the long-term sustainability of the banks (Ntim et al., 2015).

5.2 Empirical findings of the effect of executive compensation on sustainable banking disclosure

The empirical findings of executive compensation along with bank-specific control variables on sustainable banking disclosure (SBD) are provided in Table 5.3. The table provides the results of seven models concerning the effect of three individual EC (i.e., TPAY, EPAY and NPAY) on the aggregate SBD score (Column 1) and the individual dimensions of SBD (Columns 2-7). With reference to executive directors pay, the positive and significant association between EPAY and SBD provides support for *H2a*.

Table 5.3: Effect of executive compensation on sustainable banking disclosure with clustered errors

Dependent Variable	SBD	ENV	SOC	HAS	EHR	CIV	EMP
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)
TPAY	-0.631***	-1.302***	-1.056***	-0.054	-1.051***	-0.787**	-1.284***
	(3.058)	(3.403)	(3.381)	(0.252)	(2.679)	(2.494)	(4.643)
EPAY	0.640***	0.210	0.925***	0.007	0.972***	0.420*	1.045***
	(4.098)	(0.691)	(3.844)	(0.045)	(3.207)	(1.805)	(4.881)
NPAY	-0.030***	-0.020	-0.049***	-0.017**	-0.020	-0.044***	-0.014
	(3.868)	(1.476)	(4.576)	(2.147)	(1.448)	(4.195)	(1.402)
Bank-level controls							
FSIZ	-0.248**	-0.259*	-0.277*	-0.066	-0.556***	-0.698***	-0.213*
	(2.195)	(1.924)	(1.836)	(1.577)	(2.609)	(4.308)	(1.841)
LEV	0.833	0.998	1.553	2.940	3.446	4.640	7.168
	(0.350)	(0.683)	(1.557)	(1.225)	(0.768)	(1.358)	(0.256)
AGE	1.643***	0.644*	2.919***	0.998***	0.459*	2.004***	2.819***
	(6.114)	(1.785)	(7.259)	(3.690)	(1.908)	(5.203)	(7.871)
CAP	-4.778***	-4.211***	-4.146**	-1.965*	-11.874***	-8.928***	-3.839**
	(4.143)	(4.787)	(2.392)	(1.685)	(5.447)	(5.377)	(2.486)
AFS	0.901*	0.365***	1.828**	1.162**	-0.207**	0.544*	1.262*
	(1.859)	(4.111)	(2.532)	(2.392)	(2.228)	(1.786)	(1.961)
R& D	0.612***	1.239***	0.555***	0.249*	0.259*	0.348*	0.478***
	(4.904)	(5.245)	(2.889)	(1.924)	(1.750)	(1.891)	(2.790)
Constant	8.066***	9.499***	5.538***	9.130***	3.417***	6.188***	4.896***
	(10.685)	(6.104)	(6.289)	(7.002)	(8.501)	(9.303)	(8.816)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No of observations	2027	2027	2027	2027	2027	2027	2027
R-squared	0.548	0.510	0.683	0.589	0.617	0.519	0.579

*Notes: This table presents the OLS regression results on the effect individual EC on SBD. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and year. Variables are defined as follows: Sustainable Banking Disclosure (SBD), Environmental score (ENV), Social investment and service quality score (SOC), Health and safety score (HAS), Community involvement score (CIV); Ethics and human rights score (EHR), employee score (EMP), Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY), corporate governance disclosure index (CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4*

This evidence is consistent with the theoretical prediction of Optimal contrasting theory (OCT) of a positive relationship between executive pay and SBD. Optimal contrasting theory posits that EC packages results from arms-length arrangements between strong corporate boards and senior managers (Elmagrhi et al., 2020). Therefore, EC packages can potentially be used to enhance the performance of senior managers of banks especially in areas such as achieving corporate sustainability goals (Conyon, 2014; Edmans & Gabaix, 2009). From OCT perspectives, banks can achieve long-term value creation by linking EC to sustainability performance. This is mainly due to the assumption that senior managers have less power in setting their own remuneration (Elmagrhi et al., 2020).

Observably, the findings contribute to a small, but growing findings which show that executive pay has a positive impact on SBD (e.g., Kartadjumena & Rodgers, 2019; Callan & Thomas, 2014). The findings lend empirical support for the recommendations of sustainable banking and CG codes in the ESSA that incorporate the expectation that, EC will be linked

with SBD. It also provides significant support for the recent call for banks to direct executive's attention towards SBPs by linking executive pay to progress in sustainability related performance (e.g., Nwagwu, 2020; Wasiuzzaman & Wan Mohammad, 2020; Shumsky, 2019).

By contrast, NPAY and TPAY are negatively and significantly linked with SBD as reported by other studies in the non-financial sector (e.g., Miles & Miles, 2013; Cai et al., 2011). These findings do not provide empirical support for *H2b* and *H2c*, respectively. Theoretically, this results confirm the argument of MPH that non-executive compensation packages result from close negotiations between weak executives and strong independent board. The outcome of such negotiations is the design and implementation of inefficient compensation schemes, leading to an increase in agency conflicts (Mallin et al., 2015; Cho et al., 2014). Therefore, MPH expects a negative link between TPAY and NPAY, and SBD in the banking system. This is because non-executive directors in the banking system have the power to determine their own compensation (Van Essen et al., 2015). The Combined CG Code in the region recommends that pay within banks should be determined by a committee of non-executive directors. For example, based on the recommendations of the Ghana CG Code (2018), the remuneration committee in the banks are made up of non-executive directors including the chairperson. This suggests that, non-executive pay is largely determined by non-executive members in negotiation with the executives, especially the CEO. This could partly explain the negative link in the ESSA banking system.

Concerning the effect of the individual EC on the individual dimensions of SBD, the results are contained in Models 2 to 7 of Table 5.3. First, the coefficients of EPAY on SOC, EHR, CIV and EMP in Table 5.3 are all positive and statistically significant. This infers that *H2d* is accepted. Theoretically, these findings support the view of OCT which suggests that banks can rely on executive pay as a partial remedy to resolve agency conflict (Kartadjumena & Rodgers, 2019). The theory indicates that shareholders through the board provides an optimal compensation contract with an efficient payment scheme for senior managers to act in accordance with broader stakeholders' interests, aiming to maximise their value (Kartadjumena & Rodgers, 2019; Conyon, 2014). Executive pay incentives involving broader sustainability performance-linked compensations can minimize agency problems (Jensen & Murphy, 1990), since it can ensure that senior managers think and act like stakeholders (Ntim et al., 2015).

From OCT perspective, the objective of this approach is to direct the attention of senior managers of banks towards long-term value creation by linking EC to SBD. Therefore, OCT predicts a strong positive relationship between executive pay and SBD, due to the assumption that executives have less control in setting their own pay (Upneja & Ozdemir, 2014; Dong et

al., 2010). However, the insignificant influence of EPAY on ENV and HAS does not provide support for *H2d*. The evidence is contrary to the findings of Kartadjumena and Rodgers (2019) who report that higher executive pay in Indonesian banking sector motivates managers to commit to more climate and environmental concerns.

Second, results reported in Models 2 to 7 of Table 5.3 indicate that NPAY has negative effect on all the six dimensions of SBD, except in Model 4 (HAS) where the association is insignificant. These findings are contrary to *H2e*; hence the positive link prediction is not empirically supported. Theoretically, these findings offer support for MPH perspective, which maintains that non-executive compensation arrangements as a result of tight negotiations between influential non-executive directors and weak executives that may lead to the implementation of ineffective incentive contract that increases agency conflicts (Mallin et al., 2015; Cho et al., 2014). Under such arrangement, linking EC to SBD may not necessarily lead to improved SBD performance. This is because influential non-executive directors on remuneration committee are presumed to set their own compensation packages and as such whether EC is linked to SBD or not MPH expects a negative EC-SBD nexus.

Finally, the results in Models 2 through to 7 of Table 5.3 show that TPAY has negative influence on all the six SBD dimensions, except in Model 4, where TPAY has a negative but insignificant relationship with HAS. These findings offer no empirical support for *H2f*. The findings are however consistent with MPH which predicts a negative relationship between total EC and SBD. It argues that agency conflict in the banking system arises because non-executive directors may reward powerful CEOs and senior managers with an excessively high pay in return for a similar and reciprocal support from the CEO and the executives (Ntim et al., 2019; Morse et al., 2011). Essentially, under such arrangement linking EC to SBD may not necessarily lead to improved SBD performance. This is because executive and non-executive directors are assumed to set their own pay in a reciprocal (give-and-take) arrangement. Thus, in such weak CG environment, whether EC is linked to SBD or not (Bebchuk & Fried, 2003), MPH expects a negative EC-SBD nexus.

Regarding bank-specific control variables, contrary to the prediction of the study, FSIZ is negatively related with the SBD in the models. This evidence is inconsistent with the argument that large banks have stronger motive to engage in SBD activities (Kabir & Thai, 2017). It suggests that large banks do not assume more activities with greater impact on society in ESSA (Khan, 2010). In addition, the suggestion that stakeholders in society tend to scrutinise larger banks therefore, they would be under greater pressure to engage and report their SBD activities to legitimise their business is not supported in the region (Khan, 2010). Leverage appears to be

insignificantly related to SBD. This is in line with similar findings of prior banking studies (Jizi et al., 2014; Khan, 2010; Reverte, 2009).

Consistent with the expectation that older banks may be involved in higher SBD due to their long-standing relationship with their stakeholders, the results show that age has positive relationship with SBD across all the models. This evidence supports the view that more established and older banks disclose extensive SBD in the region (Orazalin, 2019). The results for the SBD proxies and CAP show negative association. The implication is that the assertion that better-capitalized banks provide more SBD to reduce the information asymmetry between the bank and external stakeholders is not supported, which is contrary to the findings of Siueia et al. (2019). In line with the expectation of the study, there is a positive association between R&D and SBD in all the Models. These findings are similar to the findings of Jo and Harjoto (2012). Finally, the coefficient on audit firm size in the models generally show the predicted sign, as there is positive and significant relationship between AFS and the SBD measures across all the models except in Model 5 which is negative.

5.3 Executive compensation and SBD-nexus: The moderating effect of CGI

The chapter also distinctively investigates whether CGI can moderate the pay-for-sustainability sensitivity (PSS) by estimating Eq. (8). Table 5.4 provides the ordinary least squares regression results exploring the probable moderating impact of CGI on the EC-SBD nexus. Observably, the findings indicate that bank-level CGI has a moderating impact on the pay-for-sustainability sensitivity. Specifically, the result in Model 2 shows that CGI*EPAY has a positive impact on SBD. The evidence, thus, offer empirical support for *H3a* that bank level internal governance disclosures positively moderate the relationship between executive compensation packages and SBD.

The findings also lend support for the predictions of OCT. Similarly, the results in Model 3 of Table 10 indicate that CGI*NPAY has a positive effect on SBD, however the association is weak as the relationship is insignificant. This does not offer empirical support for *H3b*. In contrast, Model 1 of Table 5.4 shows that CGI*TPAY has a negative but insignificant impact on SBD which does not provide support for *H3c,* thus *H3c* is rejected. Theoretically, strong managerial monitoring associated with sustainability progress linked to EC by strong boards can incentivise managers to engage in more SBD (Elmagrhi et al., 2020). Further, compliance, shareholder rights and enforcement structures can mitigate agency conflicts (Ntim et al., 2015).

For instance, good CG mechanisms such as greater activism by institutional investors can enhance the EC-SBD nexus (Ntim et al., 2015).

Table 5.4: The moderating effect of CGI on the pay-for-sustainability sensitivity with clustered errors

Dependent Variable	SBD	SBD	SBD
Model	(1)	(2)	(3)
TPAY	-0.267*		
	(1.654)		
TPAY*CGI	-0.019		
	(1.402)		
CGI	0.054***	0.136***	0.082***
	(2.643)	(6.496)	(3.594)
EPAY*CGI		0.034***	
		(6.167)	
EPAY		2.488***	
		(6.430)	
NPAY*CGI			0.001
			(0.178)
NPAY			-1.002***
			(3.132)
Bank-level controls			
FSIZ	-0.216*	-0.445***	-0.182*
	(1.922)	(4.041)	(1.951)
LEV	1.545	0.143	1.892
	(0.639)	(0.059)	(0.795)
AGE	1.787***	1.708***	1.711***
	(6.645)	(6.365)	(6.433)
CAP	-4.489**	-4.478***	-4.600***
	(3.989)	(3.907)	(3.987)
AFS	0.871*	0.854*	0.836*
	(1.789)	(1.768)	(1.722)
R& D	1.324**	0.235***	0.451**
	(2.451)	(2.654)	(2.185)
Constant	9.671***	6.419***	6.022***
	(7.985)	(6.875)	(9.403)
Year fixed effect	Yes	Yes	Yes
Country effect	Yes	Yes	Yes
No of observations	2027	2027	2027
R-squared	0.552	0.652	0.563

*Notes: This table presents the OLS regression results on the effect CGI on the EC-SBD nexus. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows:* Sustainable banking disclosure (SBD), *Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY), corporate governance disclosure index (CGI), an interaction between TPAY and CGI (TPAY*CGI), an interaction between EPAY and CGI (EPAY*CGI), an interaction between NPAY and CGI (NPAY*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4*

In drilling deeper, Table 5.5 offers insight into the moderating effect of CGI on the EC-SBD link in the sub-sample. In doing this, the study divides the sample based on the average score of CGI in line with Elmagrhi et al. (2020) and re-estimate Eq. (8) in the sub-samples. This gives rise to two groups: banks that are well-governed and banks that are poorly-governed.

Table 5.5: The moderating effect of CGI on pay-for-sustainability sensitivity in sub-sample analysis with clustered errors

Break sample	**Better-governed banks**			**Poorly-governed banks**		
Dep. Variable	SBD	SBD	SBD	SBD	SBD	SBD
Model	(1)	(2)	(3)	(4)	(5)	(6)
TPAY	-0.325***			-0.546*		
	(2.854)			(1.741)		
TPAY*CGI	-0.031			-0.009		
	(1.322)			(1.414)		
CGI	0.246***	0.286***	0.213***	0.001*	0.003*	0.005***
	(3.548)	(2.895)	(3.245)	(1.694)	(1.784)	(2.854)
EPAY*CGI		0.054***			0.011**	
		(4.613)			(2.280)	
EPAY		2.981***			1.547***	
		(4.814)			(2.897)	
NPAY*CGI			0.002			0.305
			(0.312)			(1.413)
NPAY			-0.856***			-0.125***
			(4.581)			(2.854)
Bank-level controls						
FSIZ	-0.487***	-0.526***	-0.461***	-0.066	-0.0957***	-0.464**
	(4.516)	(4.235)	(4.423)	(0.297)	(4.315)	(2.311)
LEV	3.919	0.057	4.455	0.732	2.015*	1.811
	(0.972)	(0.987)	(1.104)	(0.239)	(1.675)	(0.585)
AGE	1.555***	1.797***	1.618***	1.632**	0.471	1.349*
	(5.696)	(6.227)	(5.930)	(2.361)	(0.665)	(1.915)
CAP	-0.042	-0.483	-0.018	-7.716***	-7.393***	7.659***
	(0.032)	(0.364)	(0.013)	(7.443)	(7.348)	(7.398)
AFS	0.925*	0.882*	0.932*	0.414	0.663	0.673
	(1.773)	(1.725)	(1.785)	(0.347)	(0.567)	(0.560)
R& D	0.448***	0.198	0.489***	0.985**	0.749**	0.324**
	(3.873)	(1.436)	(4.291)	(2.451)	(2.102)	(2.246)
Constant	9.379***	6.737***	2.455***	3.926***	9.331***	8.934***
	(4.177)	(3.554)	(5.067)	(5.850)	(5. 259)	(6.570)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes	Yes
No of obs.	1166	1166	1166	861	861	861
R-squared	0.515	0.686	0.505	0.432	0.260	0.220

*Notes: This table presents the OLS regression results on the effect CGI on the EC-SBD nexus. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY), corporate governance disclosure index (CGI), an interaction between TPAY and CGI (TPAY*CGI), an interaction between EPAY and CGI (EPAY*CGI), an interaction between NPAY and CGI (NPAY*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4*

The findings contained in Table 5.5 indicate that banks with higher CGI value (better-governed banks) tend to have higher positive and significant (0.054) EPAY*CGI moderating effect on SBD. Similarly, the positive moderating effect of EPAY*CGI on SBD is significantly lower (0.011) in poorly-governed banks (i.e., banks with lower CGI values). Consistent with OCT, the evidence shows that in banking system where the internal CG mechanisms are good, EC packages can be structured in such a manner that it aligns the interest of senior managers and the wider stakeholder groups (Jensen & Meckling, 1976).

However, in line with managerial power hypothesis, in poor CG banking environment, influential but opportunistic senior managers may expropriate the wealth of shareholders and stakeholders (Cho et al., 2014; Shleifer & Vishny, 1997). Proponents of MPH argue that EC packages that are overly determined by senior bank managers may lead to a reduction in long-term bank value and a decoupling of pay-for-sustainability sensitivity (Pepper & Gore, 2015; Bebchuk & Fried, 2005). This is because senior bank managers determine their own compensation packages, linking executive pay to corporate sustainability goals may not necessarily lead to higher improvement in SBD in banks due to the weak CG structures.

6.4. Robustness checks

The study conducted a number of tests to check the robustness of the findings. The study carried out two different tests, a two-stage least squares (2SLS) and lagged structure model. Overall, the results of robust analyses suggested that the findings are not driven by any latent endogeneity and sample selection bias issues.

It is possible that the relationships that this chapter reports between banks' CGI and EC are being driven by a reverse causality or by a latent variable (Ntim et al., 2015; Jiang et al., 2015). Prior CG studies (e.g., Ntim et al., 2015; Jian et al., 2015; Choi et al., 2013) address this endogeneity issues by using a 2SLS approach, and so the chapter adopts similar method. However, choosing an appropriate instrument for a 2SLS model is often a challenge (Jian et al., 2015). Previous research used one or two-year lagged levels of CGI as primary instrument (e.g., Choi et al., 2015; Ntim et al., 2015). Similarly, the study proposes that lagged CGI could be appropriate instruments for the analysis. This is because the study anticipate that CGI is endogenous, lagged CGI is used as instrumental variable for the endogenous CGI. In each of the Models, the Durbin score and Wu-Hausman endogeneity tests are used to check the appropriateness of using the 2SLS approach. The results of the Durbin score and Wu-Hausman statistics show large P-values in the three models, which suggest that the study fail to reject the null hypothesis that the variables are exogenous.

Specifically, the endogeneity tests results confirm that the CGI variable in all the models are exogenous, suggesting that the OLS estimates are reliable. Due to the lagged variables, the number of observations were reduced to 1820 in the 2SLS regressions. In the first stage regression, the study tests whether the instruments used are weak. The results in all the models show that, the partial R-square which measures the correlation between the CGI and lagged CGI variables are high (partial R-sq. > 0.730). In addition, the F-statistics are also much higher

than the critical values in all the models. Thus, the test rejects the null hypothesis that the instruments are weak, suggesting that the instruments have good explanatory power for the endogenous CGI.

The results in Table 5.6 show that the coefficients of CGI on TPAY, EPAY and NPAY are negative and significant (see Models 1 to 3), thereby suggesting that the evidence that CGI has negative impact on EC is robust to latent endogeneities that may stem from missing variables. More importantly, the results are consistent with the OLS regression (see Table 5.1), which confirms that *H1a* to *H1c* hold regardless of the regression approach employed. Specifically, the broad CGI has negative and significant association with all the three individual components of EC, TPAY, EPAY and NPAY, respectively in Models 1, 2 and 3 of Table 5.6.

Table 5.6: Effect of CGI on EC using 2SLS and lagged structure models with clustered errors

Robust Test	2SLS Model			Lagged Model		
Dependent Variable	TPAY	EPAY	NPAY	TPAY	EXPAY	NPAY
Model	(1)	(2)	(3)	(4)	(5)	
CGI	-0.009***	-0.011***	-0.193***	-0.008***	-0.011***	-0.163***
	(3.30)	(3.07)	(3.11)	(3.039)	(3.597)	(3.272)
Bank-level controls						
FSIZ	0.323***	0.379***	1.654***	0.262***	0.302***	1.208***
	(20.86)	(19.62)	(4.80)	(16.151)	(14.698)	(3.712)
LEV	-0.525	-0.166	-10.442	-1.035***	-0.527	-9.922
	(1.49)	(0.38)	(1.33)	(2.696)	(1.085)	(1.286)
AGE	0.096**	0.203***	0.337*	0.067	0.182***	0.840
	(2.37)	(3.99)	(1.81)	(1.567)	(3.354)	(0.974)
CAP	0.063*	0.536**	7.601*	0.077	0.267	5.258
	(1.85)	(2.42)	(1.92)	(0.414)	(1.139)	(1.414)
AFS	0.046	-0.156	-3.057	-0.239***	-0.201**	-1.276
	(0.32)	(0.87)	(0.95)	(3.091)	(2.054)	(0.821)
R& D	0.377***	0.512***	1.779***	0.339***	0.487***	1.724***
	(22.62)	(24.65)	(4.80)	(19.403)	(21.936)	(4.899)
Constant	1.073*	-6.012	3.482***	0.074**	-1.146**	2.934***
	(1.82)	(3.70)	(2.12)	(2.168)	(2.061)	(3.737)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Country effects	Yes	Yes	Yes	Yes	Yes	Yes
No of observations	1820	1820	1820	2026	2026	2026
R-square				0.697	0.571	0.531
Partial R-squared	0.796	0.7359	0.736			
F-sta	4948.25	4948.25	4948.25			
Endogeneity	0.029	0.801	0.642			

*Notes: This table presents the 2SLS and lagged regression results on the effect CGI on EC. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY), corporate governance disclosure index (CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Although, the endogeneity test results of the 2SLS estimates confirm that the CGI variable in all the models are exogenous, the study followed prior CG studies (e.g., McGuinness et al.,

2017; Choi et al., 2013; Brick & Chidambaran, 2010), who similarly conducted a 2SLS approach so as to make the findings comparable.

The study conducted an additional investigation based on lag effect. Theory and evidence suggest that there is a time lag in the CGI-EC relationship in which this year's CGI structures may be associated with next year's EC (e.g., Ntim et al., 2015; Choi et al., 2013; Larcker & Rusticus, 2010). This is based on the argument that, decisions made by the board of banks may have a gestation period. The implication is that the potential benefit of good corporate governance disclosures on executive pay may not materialize in the year of implementation but may be seen in the subsequent year. For example, when the CEO and chairperson roles are split, this may not impact on executive compensation in the same year (Albassam, 2014). Following prior research (e.g., McGuinness et al., 2017; Ntim et al., 2015; Choi et al., 2013), endogeneity issues that may be caused by probable time lags between the implementation of CGI and EC are controlled for by re-estimating Eq. (6), with one-year lagged structure as specified in Eq. (14) below:

$$EC_{it} = \alpha_0 + \beta_1 CGI_{it-1} + \beta_2 FSIZ_{it-1} + \beta_3 LEV_{it-1} + \beta_4 AGE_{it-1} + \beta_5 CAP_{it-1} + \beta_6 AFS_{it-1} + \beta_7 R\&D_{it-1} + \beta_8 YDU_{it} + \beta_9 CDU_{it} + \varepsilon_t \quad \text{[Eqn 14]}$$

Models 4 to 6 of Table 5.7 provide the regression results of the lagged structure. The results in Table 5.7 show that the coefficients of CGI on TPAY, EPAY and NPAY are negative and significant across all the models in the lagged structure. This suggests that the findings in Table 5.1 are robust to estimating lagged CGI-EC model. Hence, the results of the lagged test are consistent with the findings un-lagged structure reported earlier in Table 5.1. These findings demonstrate that the CGI is a dominant factor in determining EC in the ESSA banks.

Additionally, the study conducts 2SLS robust analysis focusing on the two sub-groups; better- governed and poorly-governed banks. The six regression Models in Table 5.2 are repeated using 2SLS estimation approach, and the results are presented in Table 5.7. For each regression, CGI is assumed to be endogenous. Following prior studies (e.g., Choi et al., 2015; Ntim et al., 2015), a one-year lagged scores of CGI and the control variables are used as instruments. In each of the Models, the Durbin score and Wu-Hausman endogeneity tests are used to check the appropriateness of using the 2SLS approach.

Table 5.7: Break sample investigation of the impact of CGI on EC based on 2SLS approach with clustered errors

Break sample analysis	**Better-governed banks-2SLS**			**Poorly-governed banks-2SLS**		
Dependent Variable	TPAY	EPAY	NPAY	TPAY	EPAY	NPAY
Model	(1)	(2)	(3)	(4)	(5)	(6)
CGI	-0.013*	-0.01**	-0.728***	-0.007	-0.021	-0.0004
	(1.85)	(1.96)	(5.25)	(1.31)	(1.40)	(0.932)
Bank-level controls						
FSIZ	0.343***	0.471***	3.613***	0.305***	0.277***	0.145***
	(14.34)	(15.39)	(5.24)	(13.43)	(11.20)	(7.01)
LEV	-1.399	-1.859*	-1.918	-0.391	-0.492	-0.304
	(1.57)	(1.64)	(0.07)	(1.02)	(1.17)	(0.87)
AGE	0.198***	0.161**	2.433	0.022	0.224***	0.078
	(3.40)	(2.16)	(1.45)	(0.065)	(3.17)	(1.31)
CAP	0.049	0.439	-8.197	0.191	0.713***	-0.282
	(0.17)	(1.21)	(1.01)	(0.82)	(2.82)	(1.33)
AFS	0.065	0.143	-3.502	0.121	0.002	-0.146
	(0.33)	(0.56)	(0.61)	(0.63)	(0.01)	(0.83)
R& D	0.365***	0.512***	3.211***	0.408***	0.599***	0.143***
	(14.67)	(16.09)	(4.48)	(15.94)	(21.47)	(6.13)
Constant	0.869***	-2.191*	2.408*	0.322*	-2.246**	0.201*
	(3.193)	(1.83)	(1.72)	(1.725)	(2.25)	(1.81)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes	Yes
No of observations	963	963	963	720	720	720
Partial R-squared	0.759	0.759	0.759	0.778	0.778	0.777
F-sta	2911.77	2911.77	2911.77	2400.25	2400.25	2400.25
Endogeneity	0.106	0.201	0.444	0.773	0.875	0.622

*Notes: This table presents the 2SLS results on the effect of CGI on EC. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY), corporate governance disclosure index (CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

The results of the Durbin score and Wu-Hausman statistics show large P-values in the six models, which suggest that the study fail to reject the null hypothesis that the variables are exogenous. The results reported in Models 1 through to 6 are consistent with those reported in the main results in Table 5.2. More importantly, the sign of the coefficients and the significance levels are comparable. For example, the CGI has negative and strong significant association with all the individual components of EC; TPAY, EPAY and NPAY in better-governed banks in Models 1, 2 and 3, respectively. However, the results in Models 4, 5 and 6 of Table 5.7 show that, the CGI has negative but weak association with TPAY, EPAY and NPAY, respectively.

In additional regression with regards to the sub-sample, the study conducts lag effect analysis where a current-year's EC is explained by prior year's CGI and control variables in line with prior CG studies (e.g., Elmagrhi et al., 2020; McGuinness et al., 2017; Ntim et al., 2015; Larcker & Rusticus, 2010). Similarly, following Larcker and Rusticus (2010), the study estimates a lagged CGI-EC structure in order to additionally address potential endogeneity issues, in which case CGI and EC may be simultaneously determined, instead of the implicit

theoretical and empirical assumption that CGI impacts on EC. The results are provided in Models 1 to 6 of Table 5.8. The results in all the six Models are similar and comparable to the earlier findings reported in Table 5.2. For example, CGI has negative and significant effect on TPAY, EPAY and NPAY in Models 1, 2 and 3 respectively, suggesting that in well-governed banks, the link between EC and CGI is negative. However, the results in Models 4 to 6 show that CGI has negative but weak association with TPAY, EPAY and NPAY, respectively. This shows that the findings are robust to estimating a lagged EC-CGI model.

Table 5.8: Break sample analysis of the effect of CGI on EC using lagged structure with clustered errors

Break sample analysis	**Better-governed banks-Lagged**			**Poorly governed banks-Lagged**		
Dependent Variable	TPAY	EPAY	NPAY	TPAY	EPAY	NPAY
Model	(1)	(2)	(3)	(4)	(5)	
CGI	-0.002*	-0.007*	-0.383***	-0.001	-0.002	-0.002
	(1.873)	(1.955)	(3.803)	(0.064)	(1.126)	(0.126)
Bank-level controls						
FSIZ	0.208***	0.252***	1.469***	0.3005***	0.154***	0.155***
	(8.637)	(8.295)	(3.316)	(9.145)	(5.283)	(5.283)
LEV	-0.484	-0.114	-7.565	-1.004**	-0.337	-0.372
	(0.557)	(0.834)	(0.579)	(2.122)	(0.799)	(0.798)
AGE	0.069*	1.834*	1.151*	0.108*	0.222**	0.223**
	(1.813)	(1.858)	(1.728)	(1.962)	(2.233)	(2.233)
CAP	0.074	0.040	-2.976	-0.018	-0.372	-0.372
	(0.266)	(0.114)	(0.579)	(0.049)	(1.122)	(1.122)
AFS	0.102	0.114	1.381	0.334*	0.102	-0.102
	(0.945)	(0.834)	(0.693)	(1.798)	(0.615)	(0.616)
R& D	1.996***	0.296***	0.790*	0.358***	0.121***	0.121***
	(7.413)	(9.209)	(1.687)	(8.243)	(3.128)	(3.128)
Constant	1.036**	-0.811**	4.241**	1.115**	0.757*	0.756*
	(1.996)	(1.968)	(2.531)	(2.131)	(1.965)	(1.965)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes	Yes
No of observations	1165	1165	1165	860	860	860
R-squared	0.573	0.506	0.679	0.408	0.412	0.312

*Notes: This table presents the lagged regression results on the effect of CGI on EC. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY), corporate governance disclosure index (CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

With regards to robust check on the effect of EC on SBD, the study accounted for potential endogeneity problems by employing a 2SLS approach. Consistent with prior literature, the study adopted a one-year lagged value of the EC and all the control variables as instrumental variables (e.g., Platonova et al., 2018; Ntim & Soobaroyem, 2013). The result of the Durbin-Wu-Hausman test rejects the null hypothesis of exogenous variables in some of the Models. Hence, the study concludes that OLS results may be biased and inconsistent. Accordingly, the study re-estimates Eq. (7) using 2SLS to deal with any potential endogeneity between EC and SBD.

Specifically, the seven regression results in Table 5.3 are repeated using 2SLS approach, and the results are presented in Table 5.9. It is also noteworthy that, the results are consistent with the findings reported in Table 5.3. For example, TPAY has inverse relationship with all the SBD variables across the seven Models except in Model 4 where the association is insignificant.

Table 5.9: Effect of EC measures on SBD using 2SLS regression with clustered errors

Dependent Variable	SBD	ENV	SOC	HAS	EHR	CIV	EMP
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)
TPAY	-0.887***	-1.794***	-1.109**	-0.056	-1.414**	-0.538**	-2.117***
	(2.96)	(3.28)	(2.46)	(0.18)	(2.55)	(2.24)	(5.20)
EPAY	0.525**	0.173	1.087***	0.114	1.123***	0.315*	1.567***
	(2.47)	(0.45)	(3.40)	(0.53)	(2.86)	(1.70)	(5.43)
NPAY	-0.029***	-0.019	-0.052***	-0.017*	-0.028*	-0.043***	-0.009
	(3.44)	(1.30)	(4.12)	(1.96)	(1.81)	(3.54)	(0.85)
Bank-level controls							
FSIZ	-0.247*	-0.003*	-0.264	-0.063*	-0.477**	-0.709***	-0.095*
	(1.98)	(1.97)	(1.41)	(1.71)	(2.07)	(3.93)	(1.66)
LEV	1.326	0.640	5.528	2.375	5.133	6.479*	7.100**
	(0.56)	(1.49)	(1.56)	(0.99)	(0.239)	(1.90)	(2.22)
AGE	1.394***	0.383*	2.765***	0.909***	0.552*	1.798***	2.76***
	(5.07)	(1.76)	(6.70)	(3.25)	(1.87)	(4.52)	(7.42)
CAP	3.941***	-10.703***	4.788***	-1.556*	-11.652***	-8.255***	-3.706**
	(3.28)	(4.89)	(2.66)	(1.72)	(5.26)	(4.75)	(2.28)
AFS	2.132**	2.423*	2.090	2.008**	1.629*	1.976*	2.732**
	(2.20)	(1.77)	(1.44)	(2.03)	(1.91)	(1.81)	(2.08)
R&D	0.443***	1.311***	0.400*	0.189	0.227*	0.254	0.446**
	(3.14)	(5.10)	(1.89)	(1.31)	(1.87)	(1.24)	(2.33)
Constant	9.846**	8.889***	10.498***	7.28***	5.286***	8.936**	2.320*
	(2.35)	(3.21)	(2.88)	(3.02)	(3.14)	(2.26)	(1.86)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No of observations	1820	1820	1820	1820	1820	1820	1820
Partial R-sq	0.5131	0.630	0.513	0.504	0.554	0.504	0.554
F-sta	772.83	735.17	755.18	772.83	735.18	735.18	735.18
Endogeneity	0.139	0.119	0.450	0.818	0.171	0.721	0.029

*Notes: This table presents the 2SLS regression results on the effect of the individual EC variables on the individual dimensions of SBD. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Sustainable Banking Disclosure (SBD), Environmental score (ENV), Social investment and service quality score (SOC), Health and safety score (HAS), Community involvement score (CIV); Ethics and human rights score (EHR), employee score (EMP), Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY).), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Similarly, EPAY has a positive association with all the seven dimensions of SBD reported in Table 5.9. However, in Models 2 and 4 the relationships are weak as they are statistically insignificant. Finally, the results in Models 1 to 7 reveal that TPAY has an inverse association with all the SBD scores. However, the negative association in Models 2 and 7 are statistically insignificant. Thus, the 2SLS estimated coefficients are comparable to those from OLS regression results in Table 5.3 and the significance levels are also consistent. This observations suggest that, the results of the 2SLS test are consistent and reaffirm the main findings in the OLS analysis as reported in Table 5.3.

The study deepens analysis on the pay-for-sustainability sensitivity by considering lag effect. Importantly, to check potential simultaneity issues that may originate from possible lag effect between the EC and SBD, the study follows prior studies (e.g., McGuinness et al., 2017; Choi et al., 2013; Ntim & Soobaroyen, 2013), and introduce a one-year lag between SBD and EC in which present years' SBD depends on last years' EC (t-1 effect) in Eq. (7) below:

$$SBD_{it} = \alpha_0 + \beta_1 EPAY_{it-1} + \beta_2 NPAY_{it-1} + \beta_3 TPAY_{it-1} + \beta_4 FSIZ_{it-1} + \beta_5 LEV_{it-1} + \beta_6 AGE_{it-1} + \beta_7 CAP_{it-1} + \beta_8 AFS_{it-1} + \beta_9 R\&D_{it-1} + \beta_{10} YDU_{it} + \beta_{11} CDU_{it} + \varepsilon_t \quad \text{[Eqn 15]}$$

The results of the lagged structure reported in Table 5.10 offer additional support for those reported in Table 5.3. Similarly, results in Table 5.10 point out the importance of executive pay (EPAY) in encouraging sustainable banking disclosures in the ESSA region. Specifically, EPAY has a positive association with all the seven dimensions of SBD reported in Table 5.10 except in Models 2 and 4 where the relationships are statistically insignificant. All in all, the evidence offers strong support for hypothesis *H2d*.

Table 5.10: The effect of executive compensation on SBD using lagged model with clustered errors

Dependent Variable	SBD	ENV	SOC	HAS	EHR	CIV	EMP
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)
TPAY	-0.711***	-1.262***	-1.095***	-0.155	-1.216***	-0.606**	-1.322***
	(3.489)	(3.361)	(3.676)	(0.756)	(3.169)	(2.073)	(4.866)
EPAY	0.585***	0.278	0.867***	0.054	0.911***	0.296*	1.057***
	(3.797)	(0.958)	(3.676)	(0.339)	(3.073)	(1.980)	(5.033)
NPAY	-0.022***	-0.015	-0.044***	-0.011*	-0.013	-0.038***	-0.009
	(3.097)	(1.141)	(4.053)	(1.846)	(0.936)	(3.707)	(0.993)
Bank-level controls							
FSIZ	-0.199*	-0.360*	-0.265*	-0.041*	-0.498**	-0.732***	-0.212*
	(1.896)	(1.817)	(1.648)	(1.833)	(2.459)	(4.743)	(1.754)
LEV	1.185	2.566	5.788*	3.201	3.095	4.485	7.005
	(0.497)	(0.584)	(1.640)	(1.332)	(0.689)	(1.309)	(0.200)
AGE	1.694***	0.624*	2.961***	1.021***	0.412*	2.024***	2.840***
	(6.317)	(1.641)	(7.369)	(3.779)	(1.815)	(5.251)	(7.936)
CAP	-4.633***	-10.190***	-4.407**	-1.926*	-11.597***	-8.759***	-3.591**
	(4.017)	(4.784)	(2.546)	(1.655)	(5.329)	(5.276)	(2.329)
AFS	0.833*	0.619*	1.708***	1.118**	-0.346*	0.443*	1.121*
	(1.715)	(1.695)	(2.358)	(2.296)	(1.830)	(1.638)	(1.738)
R& D	0.584***	1.139***	0.579*	0.295**	0.326*	0.337*	0.463***
	(2.416)	(5.050)	(1.650)	(2.393)	(1.642)	(1.918)	(2.838)
Constant	9.068***	9.310***	5.765***	9.321***	3.430***	6.737***	4.147***
	(10.726)	(6.506)	(6.385)	(7.119)	(8.559)	(9.491)	(8.944)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No of observations	2026	2026	2026	2026	2026	2026	2026
R-squared	0.535	0.513	0.618	0.589	0.612	0.522	0.517

*Notes: This table presents the lagged regression results on the effect of EC on SBD. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Sustainable Banking Disclosure (SBD), Environmental score (ENV), Social investment and service quality score (SOC), Health and safety score (HAS), Community involvement score (CIV); Ethics and human rights score (EHR), employee score (EMP), Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY).), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

However, the results for TPAY and NPAY run counter to hypothesis H2e and H2f, respectively. The analysis reported in the table 5.10 shows that TPAY has inverse relationship with all the SBD variables across the seven Models. But the results indicate the absence of a significant negative TPAY effect on health and safety score. Nonetheless, the results reaffirm the earlier findings of TPAY on SBD in the OLS regression model. Likewise, the results in Models 1 to 7 reveal that NPAY has an inverse association with all the SBD scores. However, the negative association in Models 2 and 7 are weak as they were found to be statistically insignificant. These confirm that the evidence is robust to estimating of lagged EC-SBD structure.

Finally, following Larcker and Rusticus (2010) and consistent with prior CG, EC, and SBD studies (e.g., McGuinness et al., 2017; Ntim et al., 2015; Choi et al., 2013), the study performs two additional analysis to investigate possible endogeneities by assessing a lagged CGI-PSS structure and 2SLS approach. To address simultaneity issues resulting from the occurrence of a lagged CGI-PSS structure, the study includes a one-year between SBD and EC*CGI in which present years' SBD depends on last years' EC*CGI. Table 5.11 provides the results of the moderating effect of CGI on the EC-SBD nexus using 2SLS and lagged models. The positive coefficient of EPAY *CGI on SBD (0.029, t = 4.09) in Model 2 and EPAY*CGI on SBD (0.024, t = 4.216) in Model 5 are noticeable in Table 5.11. The results are therefore consistent with those provided in Model 2 of Table 5.4. This suggest that the evidence is robust to estimating of 2SLS and lagged EC*CGI-SBD models. The other results reported in Table 5.11 are also consistent with those provided in Table 5.4.

Table 5.11: Moderation effect of CGI on the pay-for-sustainability sensitivity using 2SLS and lagged models with clustered errors

Robust test	**2SLS model**			**Lagged model**		
Dependent Variable	SBD	SBD	SBD	SBD	SBD	SBD
Model	(1)	(2)	(3)	(4)	(5)	(6)
TPAY	-0.298*			-0.247**		
	(1.745)			(1.957)		
TPAY*CGI	-0.016			-0.012		
	(1.43)			(1.509)		
CGI	0.062***	0. 214***	0.087***	0.096***	0.198***	0.075***
	(3.547)	(5.841)	(2.987)	(4.857)	(3.745)	(2.654)
EPAY*CGI		0.029***			0.024***	
		(4.09)			(4.216)	
EPAY		1.987***			1.713***	
		(4.879)			(3.541)	
NPAY*CGI			0.001			0.001
			(0.53)			(0.283)
NPAY			-0.897***			-0.745***
			(3.547)			(2.624)
Bank-level controls						

FSIZ	-0.267**	-0.457***	-0.341***	-0314***	-0.472***	-0.391***
	(2.13)	(3.83)	(3.20)	(2.765)	(4.218)	(3.802)
LEV	0.551	1.105	0.539	0.612	0.099	0.407
	(0.23)	(0.46)	(0.23)	(0.251)	(0.041)	(0.169)
AGE	1.449***	1.454***	1.324***	1.736***	1.745***	1.641***
	(5.27)	(5.28)	(4.85)	(6.412)	(6.429)	(6.092)
CAP	-3.587***	-3.853***	-3.718***	-3.821***	-3.983***	-4.017***
	(3.00)	(3.22)	(3.12)	(3.279)	(3.417)	(3.457)
AFS	2.144**	2.213**	1.924*	0.047	0.047	0.002
	(2.21)	(2.29)	(1.97)	(0.097)	(0.096)	(0.003)
R& D	0.519***	0.251*	0.401*	0.547***	0.325**	0.432***
	(3.77)	(1.82)	(1.97)	(4.375)	(2.539)	(3.907)
Constant	3.303***	3.952***	7.11***	6.336***	3.916***	7.621***
	(2.21)	(3.52)	(3.11)	(8.780)	(7.923)	(9.989)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1820	1820	1820	2026	2026	2026
R-square				0.361	0.382	0.411
Partial R-sq	0.621	0.679	0.782			
F-sta	708.10	1252.96	1705.4			
Endogeneity	0.152	0.432	0.265			

*Notes: This table presents the 2SLS and lagged regression results on the moderating effect of CGI on the EC-SBD nexus. Standard errors are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Sustainable Banking Disclosure (SBD), Environmental score (ENV), Social investment and service quality score (SOC), Health and safety score (HAS), Community involvement score (CIV); Ethics and human rights score (EHR), employee score (EMP), Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY),), an interaction between EPAY and CGI (EPAY*CGI), an interaction between NPAY and CGI (NPAY*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Also, Table 5.12 provides the 2SLS analysis based on the break sample. The results are comparable with the findings reported in Table 5.5, that the positive moderating effect of EPAY*CGI on SBD is higher in well-governed banks than in poorly-governed counterparts. Specifically, the EPAY*CGI moderating impact in Model 2 of Table 5.12 is positive and significantly higher in magnitude (0.036) than the EPAY*CGI positive moderation (0.003) in Model 5 of Table 5.12. The evidence is thus consistent with the OLS results in Table 5.5.

Table 5.12: A 2SLS regression of the moderating effect of CGI on the pay-for-sustainability sensitivity in sub-sample with clustered errors

Break sample	**Better-governed banks**			**Poorly-governed banks**		
Dependent Variable	SBD	SBD	SBD	SBD	SBD	SBD
Model	(1)	(2)	(3)	(4)	(5)	(6)
TPAY	-0.294***			-0.381*		
	(3.546)			(1.817)		
TPAY*CGI	-0.049			-0.021		
	(0.56)			(1.19)		
CGI	0.254***	0. 208***	0.169*	0.007*	0.002*	0.009***
	(4.854)	(3.127)	(1.965)	(1.668)	(1.651)	(3.547)
EPAY*CGI		0.036***			0.003*	
		(4.76)			(1.838)	
EPAY		2.589***			1.357***	
		(3.547)			(3.148)	
NPAY*CGI			0.001			0.024
			(0.26)			(0.663)
NPAY			-0.687***			-0.132***
			(2.897)			(3.854)
Bank-level controls						
FSIZ	-0.083***	-0.875***	-0.671***	-0.557***	-0.243	-0.001
	(4.49)	(4.76)	(4.07)	(3.11)	(1.43)	(0.993)

LEV	2.913	3.379	3.303	7.026***	7.889*	7.857***
	(0.49)	(0.57)	(0.56)	(2.77)	(3.08)	(3.06)
AGE	1.338***	1.444***	1.309***	0.964**	1.156**	1.103**
	(3.40)	(3.67)	(3.37)	(2.21)	(2.59)	(2.54)
CAP	-0.147	-0.705	-0.028	-8.178***	-8.209***	-8.177***
	(0.08)	(0.37)	(0.02)	(5.34)	(5.27)	(5.25)
AFS	2.299*	2.424*	2.092*	1.351	1.509	1.632
	(1.72)	(1.82)	(1.54)	(1.06)	(1.17)	(1.27)
R& D	0.223	1.152	0.400**	0.841***	0.541**	0.152
	(1.16)	(0.79)	(2.38)	(3.95)	(2.29)	(0.80)
Constant	2.583*	2.224*	2.062**	5.861***	2.517***	4.093***
	(1.65)	(1.75)	(2.24)	(3.91)	(3.19)	(3.77)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes	Yes
No of observations	963	963	963	720	720	720
Partial R-sq	0.643	0.771	0.773	0.602	0.694	0.294
F-sta	553.59	1034.84	1045.72	344.87	530.43	802.31
Endogeneity	0.979	0.637	0.877	0.302	0.634	0.500

*Notes: This table presents the 2SLS regression results on effect CGI on the EC-SBD nexus. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Sustainable banking disclosure (SBD), Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY), an interaction between EPAY and CGI (EPAY*CGI), an interaction between NPAY and CGI (NPAY*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Likewise, the study follows prior studies (e.g., McGuinness et al., 2017; Ntim et al., 2015; Choi et al., 2013) to test for potential lag effect in the moderating effect of CGI on the pay-for-sustainability sensitivity (PSS) in the sub-sample by re-estimating Eq. (8) and including a one-year lag between the interaction variable CGI*EC and the SBD as captured in Eq. (16) below:

$$SBD_{it} = f\begin{pmatrix} CGI_{it-1} \\ EC_{it-1} \\ CGI_{it-1} \times EC_{it-1} \end{pmatrix} + CONTROLS_{it-1} \qquad \text{[Eqn 16]}$$

Table 5.13 reports the findings of lagged structure on the moderating impact of EC*CGI on SBD. Results in Table 5.13 indicate that banks with higher CGI values (better-governed banks) tend to have higher positive and significant (0.028) EPAY*CGI moderating effect on SBD, whilst the positive moderating effect of EPAY*CGI on SBD is significantly lower (0.013) in poorly-governed banks (i.e., banks with lower CGI values). These findings are similar to the original OLS results reported in Table 5.5, suggesting that the EC*CGI analysis is robust to lagged structure. The results suggest that CGI positively and significantly moderates the executive directors pay-for-sustainability sensitivity in ESSA banks.

Similar to earlier findings, the study finds positive but insignificant association between NPAY*CGI and SBD, suggesting that the moderating effect of CGI on the NPAY-SBD nexus is weak. This does not offer empirical support for *H3b*. By contrast and similarly, the results in

Table 5.13 shows that, the moderating effect of CGI on the TPAY*SBD nexus is negative and insignificant. Thus, *H3c* is rejected. In general, the inference of the robust analyses show that the findings are not driven by any probable endogeneity problems.

Table 5.13: Effect of CGI moderating effect on the pay-for-sustainability sensitivity based on lagged model with clustered errors

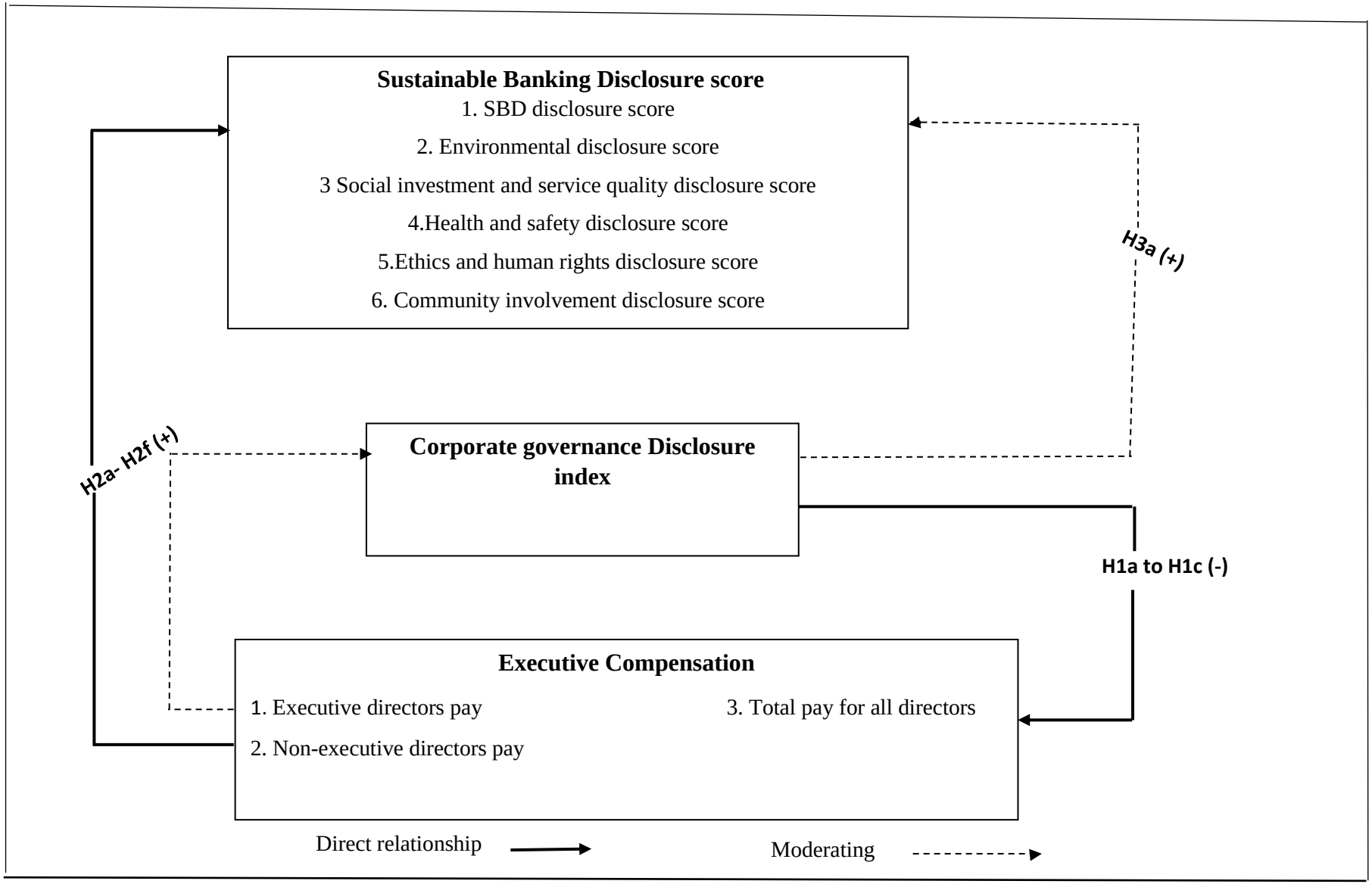
Break sample	**Better- governed banks-lagged**			**Poorly-governed banks-lagged**		
Dependent Variable	SBD	SBD	SBD	SBD	SBD	SBD
Model	(1)	(2)	(3)	(4)	(5)	(6)
TPAY	-0.237***			-0.413*		
	(2.987)			(1.874)		
TPAY*CGI	-0.029			-0.091		
	(0.576)			(0.846)		
CGI	0.289***	0.255***	0.147*	0.010*	0.008*	0.014***
	(3.185)	(3.892)	(1.785)	(1.854)	(1.745)	(2.985)
EPAY*CGI		0.028***			0.013***	
		(2.661)			(2.137)	
EPAY		2.457**			1.301***	
		(2.364)			(4.258)	
NPAY*CGI			0.001			0.325
			(0.983)			(1.459)
NPAY			-0.557***			-0.148***
			(2.875)			(3.587)
Bank-level controls						
FSIZ	-0.508***	-0.483***	-0.510***	-0.067	-0.862***	-0.815***
	(4.349)	(4.139)	(4.446)	(0.296)	(4.016)	(3.765)
LEV	3.796	3.661	3.981	0.732	5.001*	3.369
	(0.922)	(0.888)	(0.966)	(0.238)	(1.665)	(1.099)
AGE	1.784***	1.798***	1.824***	1.621***	0.597	0.523
	(6.192)	(6.247)	(6.332)	(2.634)	(0.843)	(0.723)
CAP	-0.077	-0.051	-0.088	-7.617***	-6.983***	-6.369***
	(0.058)	(0.039)	(0.067)	(7.334)	(7.190)	(6.913)
AFS	0.874*	0.882*	0.904*	0.324	0.629	0.521
	(1.705)	(1.722)	(1.761)	(0.356)	(0.534)	(0.442)
R& D	0.251**	0.244*	0.289**	0.695***	1.036***	1.098***
	(2.041)	(1.964)	(2.391)	(2.546)	(3.321)	(3.925)
Constant	7.696***	7.196***	2.918***	3.824***	9.130***	9.057***
	(3.749)	(3.614)	(4.637)	(5.342)	(6.951)	(6.709)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	1165	1165	1165	860	860	860
R-squared	0.508	0.682	0.579	0.322	0.256	0.246

*Notes: This table presents the lagged regression results on the effect of CGI on the EC-SBD nexus. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Sustainable banking disclosure (SBD), Executive directors pay (EPAY), Non-executive directors pay (NPAY), Total directors pay (TPAY), an interaction between EPAY and CGI (EPAY*CGI), an interaction between NPAY and CGI (NPAY*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Overall, Fig 3.6 presents the actual conceptual framework obtained after investigating the association among corporate governance disclosure index, executive compensation and sustainable banking disclosures in the ESSA banks. It shows how broad corporate governance disclosure index can limit all the individual components of executive compensation variables: executive directors pay, non-executive directors pay and total pay of all directors as explained by the hypotheses (*H1a- H1c*). It also shows how executive compensation increases sustainable banking disclosures as suggested in the hypotheses (*H2a-H2f*).

Finally, Fig 3.6 shows how corporate governance disclosure index interacts with executive directors pay to enhance the executive directors pay-for-sustainability sensitivity in the ESSA banking sector as highlighted in the hypotheses (*H3a*). However, the study finds that, the interaction of corporate governance disclosure index with non-executive pay (CGI*NPAY) has no significant influence on sustainable banking disclosure score and thus, *H3b* is rejected. Also, the study does not document any significant impact of the interaction of corporate governance disclosure index and total directors pay (CGI*TPAY) on sustainable banking disclosure score in the ESSA region. Accordingly, *H3c* is also rejected.

Fig 3.6: Conceptual framework for pay-for-sustainability sensitivity after the analysis



Chapter 6

Empirical results on the association among CGI, SBD and FP

This chapter focuses on providing empirical results on the association among corporate governance disclosure index, executive compensation and sustainable banking disclosures in the ESSA banks. Specifically, section 6.1 provides the results on the association between corporate governance disclosure index and sustainable banking disclosures. In section 6.2, the study presents the results on the influence of sustainable banking disclosures on financial performance of banks in ESSA region. Finally, section 6.3 provides the estimation results on the moderating effect of corporate governance disclosure index on the sustainability-for-performance sensitivity in the ESSA banks.

6.1 The empirical findings of the effect of corporate governance disclosures on SBD

Prior research indicates that good CG mechanisms can lead to a reduction of agency conflicts by enhancing the monitoring role of the board. Increased managerial monitoring capacity has been suggested to be associated with increased SBD activities (Ntim & Soobaroyen, 2013). To test this, the study examines the impact of CGI on SBD in ESSA banking system. Table 6.1 provides the results of the effect of CG disclosure index (CGI) covering 4 main aspects obtained from 100 CG provisions, on SBD as captured in Eq.(9).

Table 6.1: Effect of corporate governance disclosure index on sustainable banking disclosures with clustered errors

Dep. Variable	SBD	**Better-governed**	**Poorly-governed**
(Model)	(1)	(2)	(3)
Corporate governance index*:*			
CGI	0.047***	0.254***	0.004*
	(3.064)	(4.256)	(1.694)
Controls:			
FSIZ	-0.436***	-0.584***	-0.245**
	(4.288)	(5.425)	(2.345)
LEV	-0.326	-0.492	-0.685
	(0.135)	(0.147)	(0.108)
AGE	1.569***	1.713***	1.415***
	(5.812)	(6.325)	(4.356)
CAP	-0.684***	-0.456***	-0.814**
	(3.165)	(4.012)	(2.245)
AFS	0.835*	1.451**	0.454*
	(1.715)	(2.102)	(1.651)
R&D	0.420***	0.624***	0.254**
	(3.809)	(4.214)	(2.356)
Constant	0.597***	0.745***	0.487***
	(10.494)	(12.654)	(9.874)
Year fixed effect	Yes	Yes	Yes

Country effect	Yes	Yes	Yes
R-squared	0.413	0.490	0.621
No. of observations	2027	1166	861

*Notes: This table presents the OLS regression results on the impact of CGI on SBD. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Sustainable banking disclosure (SBD), Corporate governance disclosure index (CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Noticeably, the coefficients of CGI on SBD (0.047) in Model 1 of Table 6.1 is positive and statistically significant at 1%. In general, the findings provide strong empirical support for *H4a*. The evidence suggests that the higher the level of CGI of the banks, the higher the SBD activities they engage in. This result is also consistent with other studies that document a positive effect of CGI on SBD (e.g., Platonova et al., 2018; Jizi et al., 2014).

After examining the effect of CGI on SBD in the whole sample and in drilling deeper, the study divided the sample into two sub-groups. Specifically, the analysis reported in Models 2 and 3 reflect two sub-sample: one for CGI score below the average value of the banks (mean < 64%), and another for CGI score above the mean score of the banks (mean > 64%). The study defines well-governed and poorly-governed banks in accordance with Elmagrhi et al. (2020). The first sub-group referred to as well-governed banks are banks having a CGI value above the average score of 64%. The second sub-group denoted as poorly-governed banks are banks with a CGI score lower than the mean value of 64% as applied by Elmagrhi et al. (2020). This was done to provide deeper understanding about the data (Elmagrhi et al., 2020). The findings are provided in Models 2 and 3 of Table 6.1. Concerning well-governed banks, the coefficients of the CGI on the SBD is positive and statistically significant at (1%). The coefficient is also high in magnitude (0.254). This evidence offer further strong empirical support for *H4a*. Although the coefficients of the CGI on the SBD for poorly-governed banks is also positive, however, it is statistically significant at 10%, and it is also much lower in magnitude (0.004). These results imply that *H4a* is empirically reinforced.

The related positive coefficient of the CGI on SBD is higher in magnitude as well as in terms of significance in Model 2 than in Model 3. This supports the argument that well-governed banks tend to substantially undertake SBD activities than poorly-governed banks. The inference is that, on average, better-governed banks tend to actively engage in more SBPs agenda. Overall, the positive effect of the CGI lends empirical support for the recommendations of the Combined Code in ESSA countries. Theoretically, the evidence confirms the prediction of AT, SHT and NIT, indicating that under poor governance conditions (AT), managers may employ charity approach to gain endorsement and respect from local business leaders (Galaskiewicz, 1985). However, under good CG conditions (NIT), managers tend to fortify the

existence of the banks and earn social acceptance by engaging in SBD initiatives such as contributing to the well-being and prosperity of the society (Khan, 2010). Similarly, from SHT perspective, better-governed banks will engage in more SBD initiatives as reliable means of showing their CG quality to their stakeholders (Beekes & Brown, 2006).

Next, the SBD consists of six different dimensions, as such it is probable for the impact of the CGI on each of dimensions to vary, with some possibly exhibiting strong associations with the CGI and others demonstrating weak connections (Ntim & Soobaroyen, 2013). Hence, to examine the association between each of the SBD dimensions and the CGI, the study re-estimates Eq. (9) by replacing the SBD with ENV, SOC, HAS, EHR, CIV or EMP scores one at a time, and the results are reported in Models 1-6 of Table 6.2, respectively.

Similarly, the apparent sensitivity of the evidence in Table 6.2 suggests that, the CGI-SBD link can vary based on the SBD dimension employed. For example, CGI has positive association with SOC, HAS and EMP. Further, the results show that the link between CGI and HAS is generally strong, followed by EMP and SOC, respectively. The findings of the analysis support *H4c*, *H4d* and *H4g*, respectively. These findings suggest that, CGI promote social, health and safety, and employee disclosures in the ESSA banks. The evidence also confirms the theoretical frameworks explained in section 3 that predict a positive association between CGI and SOC, HAS and EMP in the ESSA banking system. Thus, it can be inferred that the higher the level of internal governance disclosures, the better the ESSA bank's performance in SOC, HAS and EMP dimensions of SBD.

With regards to the relationship between CGI and the individual disclosure level of individual dimensions of SBD, the other results are inconsistent with the hypotheses of the study as the investigation results detect no significant associations. Specifically, contrary to the theoretical prediction and the expectation of the Combined CG Code in ESSA countries, the study finds no significant association between CGI and ENV, EHR and CIV dimensions of SBD. These findings do not offer empirical support for *H4b*, *H4e* and *H4f*. This suggests that internal corporate governance disclosure index does not impact on these dimensions of SBD in the ESSA banks.

Regarding control variables, as predicted it was observed that firm size has negative and significant relationship with the SBD scores in all the Models except in Model 3. This suggests that large banks have stronger motive to engage in SBD activities (Kabir & Thai, 2017). In addition, large banks assume more activities with greater impact on society (Khan, 2010). Hence, stakeholders in society tend to scrutinize larger banks, therefore, they would be under

much greater pressure to engage and report their SBD activities to legitimize their business (Khan, 2010).

Table 6.2: Effect of CGI on the individual dimensions of SBD with clustered errors

Dependent Variable Independent variables	(1) ENV	(2) SOC	(3) HAS	(4) EHR	(5) CIV	(6) EMP
CGI	-0.032	0.072***	0.100***	-0.0238	0.019	0.073***
	(1.121)	(3.102)	(6.496)	(0.811)	(0.374)	(3.535)
FSIZ	-0.634***	-0.392**	-0.163	-0.573***	-0.841****	-0.292**
	(3.389)	(2.573)	(1.620)	(3.001)	(5.764)	(2.161)
LEV	-0.955	-0.694*	-0.769**	-0.841	-0.604	-0.896***
	(1.117)	(1.853)	(1.996)	(1.070)	(1.042)	(11.168)
AGE	0.665	0.116***	0.933***	0.281	0.215***	0.890***
	(1.422)	(7.454)	(3.489)	(0.555)	(5.207)	(8.059)
CAP	-0.951***	0.059***	-1.687	-1.160***	-1.600***	-0.165**
	(4.651)	(2.904)	(1.463)	(5.113)	(5.155)	(2.046)
AFS	0.293	1.803**	1.111**	0.174	0.533	1.186*
	(0.327)	(2.475)	(2.305)	(0.190)	(0.764)	(1.834)
R& D	0.837***	0.568***	0.208*	0.353*	0.198	0.522***
	(4.135)	(3.444)	(1.905)	(1.711)	(1.253)	(3.566)
Constant	0.535***	0.831***	0.547***	0.334***	0.156***	0.810***
	(6.819)	(5.778)	(6.064)	(8.579)	(9.154)	(7.869)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Country dummy	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2027	2027	2027	2027	2027	2027
R-squared	0.269	0.368	0.314	0.217	0.205	0.371

*Notes: This table presents the OLS regression results on the impact of CGI on SBD sub-indices. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Environmental score (ENV), Social investment and service quality score (SOC), Health and safety score (HAS), Community involvement score (CIV); Ethics and human rights score (EHR), employee score (EMP), Corporate governance disclosure index (CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Leverage does not appear to be significantly related to SBD. This is consistent with similar findings of prior banking studies (e.g., Jizi et al., 2014; Khan, 2010; Reverte, 2009). However, the evidence is contrary to the suggestion that highly geared banks disclose more SBD information to give surety to the creditors that management are less likely to evade their covenant claims (Khan, 2010; Schipper, 1981), and to meet the needs of lenders (Cooke, 1989).

Consistent with the expectation that older banks may be involved in higher SBD engagements due to their long-standing relationship with their stakeholders, the results show that age has positive and significant relationship with SBD across all the models except in Models 1 and 4. This evidence supports the view that more established and older banks disclose extensive SBD with higher application levels (Orazalin, 2019). However, the results for CAP show negative and significant relationships in the Models except Model 3. The implication is that, the assertion that better-capitalized banks provide more SBD projects to reduce the information asymmetry between the bank and external stakeholders is not supported in ESSA,

which is contrary to the findings of Siueia et al. (2019). In line with the expectation of the study, the coefficient on R&D is positive and significant in all the models except in Model 5. These findings are similar to the findings of Jo and Harjoto (2012). Finally, the coefficient on audit firm size in the models in Table 6.2 show the predicted sign as there is positive and significant relationship between AFS and the SBD proxies across all the models except in Models 1, 4 and 5.

6.2 The results relating to sustainable banking disclosure-performance nexus

The empirical results of the impact of sustainable banking disclosure (SBD) and bank-specific control variables on financial performance (FP) of ESSA banks are contained in Model 1 to Model 4 of Table 6.3 as captured in Eq. (10).

Table 6.3: The effect of SBD on financial performance with clustered errors

Dependent Variable	(1) ROA	(2) ROA	(3) ROE	(4) ROE
Independent variables				
SBD	0.005*		0.001	
	(1.871)		(0.269)	
ENV		-0.004		-0.008***
		(1.407)		(3.309)
SOC		0.011***		0.009***
		(4.916)		(4.638)
HAS		-0.008**		-0.007**
		(2.145)		(2.124)
EHR		0.006**		0.008***
		(2.452)		(3.820)
CIV		-0.006***		-0.007***
		(2.696)		(3.544)
EMP		0.002		0.001*
		(0.655)		(1.913)
Bank-level controls				
FSIZ	-0.011	-0.011	-0.019**	-0.018*
	(0.996)	(0.332)	(1.979)	(1.825)
LEV	-0.842***	-0.918***	-0.179	-0.246*
	(2.909)	(3.184)	(0.672)	(1.927)
AGE	0.091***	0.091***	0.058*	0.060**
	(2.798)	(2.741)	(1.926)	(1.963)
CAP	-0.112***	-0.132***	-1.384***	1.503***
	(4.605)	(3.779)	(3.384)	(3.185)
AFS	-0.058	-0.072	-0.018	-0.031
	(0.793)	(0.321)	(0.266)	(0.458)
R& D	0.004	0.015	0.012	0.002
	(0.767)	(1.167)	(1.006)	(0.196)
Constant	-0.852***	-0.614***	-1.949***	1.788***
	(2.672)	(3.794)	(6.411)	(5.808)
Year fixed effect	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
Observations	2027	2027	2027	2027
R-squared	0.302	0.398	0.301	0.389

*Notes: This table presents the OLS regression results on the effect of sustainable banking disclosures on financial performance. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Return on assets (ROA), Return on equity, Sustainable banking disclosure, Environmental score (ENV), Social investment and service quality score (SOC), Health and safety score (HAS), Community involvement score (CIV); Ethics and human rights score (EHR), employee score (EMP), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Specifically, Table 6.3 provides the results of four models regarding ROA (Models 1 and 2) and ROE (Models 3 and 4). The evidence in Model 1 shows that, SBD has a positive and significant relationship with ROA. This evidence is consistent with the proposed hypothesis *H5a*. It also confirms the theoretical arguments proposed by Mellahi et al. (2016), suggesting that SBD initiatives undertaken out by banks may have a long-term effect on FP of banks. The positive effect of SBD on FP may be due to the positive impact of SBD initiatives on the reputation of the banks in the region. Subsequently, banks that are more sustainability active tend to potentially enhance their customer loyalty (Platonova et al., 2018). In addition, sustainability conscious banks may obtain the support of a much broader variety of stakeholders (Platonova et al., 2018; Kabir & Thai, 2017), thereby positively improving the FP of the banks. Also, the positive and significant empirical results may also indicate that investors take into consideration banks' SBD initiatives (Platonova et al., 2018).

However, noticeably the results in Model 3 of Table 6.3 show a positive coefficient on the SBD, but insignificant. This does not offer empirical support for *H5a*. Nevertheless, this lends support for the findings of prior investigation that suggest that there is a positive, but weak direct relationship between composite SBD and FP (e.g., Ntim & Soobaroyen, 2013; Cai et al., 2012). The results confirm findings of prior studies that suggest that SBD investments can help reduce unnecessary risks, avoid waste and, improve energy and material efficiency (e.g., Emerton & Jones, 2019; Székely & Knirsch, 2005), thereby enhancing FP of banks.

In line with the suggestion of some researchers (e.g., Platonova et al., 2018; Johnson & Greening, 1999), who propose that, it is crucial to focus on individual dimensions of SBD when examining the impact of SBD on FP, suggesting that 'explanatory information is lost' when only aggregate measure of SBD is used. Hence, additional analysis of the SBD-FP nexus was conducted based on the six individual SBD dimensions by re-estimating Eq. (10) while replacing the SBD with individual dimensions.

Model 2 of Table 6.3 presents the estimation results of the effect of the six dimensions of SBD on ROA. It is evident that SOC and EHR have positive relationship with ROA as predicted. These results are consistent with the proposed hypothesis *H5c* and *H5e*, respectively. Although EMP has a positive association with ROA, the relationship is insignificant, and thus *H5g* is not empirically supported. Similarly, SOC, EHR and EMP have positive and significant relationship with ROE, thereby offering empirical support for *H5c*, *H5e* and *H5g*. These findings are consistent with the evidence of Scholtens (2009) who documents that ethical and

employee's dimensions of SBD have positive effect on FP. Theoretically, the evidence is consistent with the predictions of NIT perspective, which stresses on legitimation and efficiency reasons for banks to engage in SBD initiatives (Ntim & Soobaroyen, 2013). The ability of banks to deliver superior service is dependent on recruiting and retaining employees with appropriate talent and skills. For example, banks that adopt good employee practices may improve efficiency and FP by attracting highly skilled labour, motivating employees and creating a bonding mechanism for them (Bhattacharya et al., 2008).

From RDT perspective, by engaging and disclosing ethics and human rights practices, banks may increase customer loyalty, which can increase business through gaining access to key resources, such as finance, contracts and deposit (Haque & Ntim, 2020). EMP disclosures can also help towards increasing employee motivation, productivity and loyalty, hiring of good employees and reducing employee turnover (Kabir & Thai, 2017). Within SHT framework, compliance with ethics and human rights in banks due to either coercive or regulative institutional pressures in the form of increased EHR practices can improve the legitimacy of bank operations and services by enhancing their reputation. This can positively impact on FP of banks. Further, greater commitment to ethically commendable practices, can lead customers' and other stakeholders to perceive the bank as adopting sustainable practices which can enhance the reputation of the bank. Bushman and Wittenberg-Moerman (2012) contend that, banks with high reputation are associated with stronger profitability and better credit quality of borrowers, which tend to increase FP.

On the contrary, the results in Models 2 and 4 of Table 6.3 indicate that, ENV has a strong and negative relationship with ROE. This evidence does not provide support for *H5b*. But, its association with ROA is negative but insignificant which does not support *H5b*. Concerning the negative association between ENV and FP, some of the empirical studies support the notion of a negative relationship between ENV and FP (e.g., Kartadjumena & Rodgers, 2019). They explain that environmentally accountable banks incur high expenses that may place such banks at greater economic disadvantage compared with less accountable banks (Devinney, 2009), hence leading to a negative ENV-FP nexus. Sustainable operations such as environmental management involves substantial investment and major modifications of banking operations in order to reduce pollution and energy consumption and/or to use renewable sources of energy (Albertini, 2013). As these initial environmental investments increase operational costs that cannot be incorporated in the product selling prices, they negatively affect FP of banks at least in the short-term (Albertini, 2013). In particular, opponents of ENV investments in banking contend that being environmentally active through minimising environmental damage can be

expensive and give rise to an administrative burden (Barnett & Salomon, 2006), which may reduce FP of banks.

Next, the results in Model 2 and 4 of Table 6.3 report positive relationship between SOC and the two FP proxies ROA and ROE, respectively. Based on SHT, satisfying the needs of different groups of stakeholders will lead to enhanced FP due to greater effectiveness and efficiency (Platonova et al., 2018). Further, good relationship with key stakeholders can help generate valuable goodwill, which will protect banks from unexpected social issues and open new prospects, which can lead to an improvement in the FP of banks (Platonova et al., 2018).

On the contrary, the empirical results shown in Table 6.3 report a negative and significant relationship between HAS and ROA. Similarly, the table shows that HAS also has negative and significant link with ROE, which does not offer empirical support for *H5d*.

Also, CIV has a negative and significant relationship with both ROA and ROE in Models 2 and 4 of Table 6.3, respectively. These results do not offer empirical support for *H5f*. Opponents of community investments argue that being active in the community through engaging in charity projects, supporting and promoting community welfare can be expensive and give rise to an administrative burden (Barnett & Salomon, 2006). In order to incur these costs, banks will have to forgo competitive investments/products and services. Hence, engaging in CIV activities and disclosure may create financial burden for banks, which reduces FP.

With respect to bank-specific control variables, FSIZ and CAP have negative associations with both ROA and ROE, whereas AGE and R&D have positive relationships with ROA. These findings are consistent with prior research (e.g., Siueia et al., 2019; Ntim & Soobaroyen, 2013). Altogether, the estimated results are consistent with prior studies (e.g., Siueia, et al., 2019; Platonova et al., 2018). For example, the evidence is consistent with Platonova et al. (2018) who investigate the SBD-FP nexus, and document positive relationship between SBD and FP in Gulf Cooperation Council (GCC) banks.

6.3 The moderating effect of CG index on the sustainability-for-performance sensitivity

Table 6.4 provides the findings of exploring the probable moderating impact of corporate governance disclosure index (CGI) on the sustainability-for-performance sensitivity (SPS) in the ESSA banking system as captured in Eq. (11). The evidence indicates that CGI significantly influences the SPS. The result in Model 1 of Table 6.4 shows that the interaction variable CGI*SBD has a positive and significant relationship with ROA. Model 2 of Table 6.4 shows

the estimation results concerning the moderation impact of the interaction variable CGI*SBD on ROE. Observably, the coefficient of CGI*SBD on ROE is also positive and significant. The findings, thus, provide empirical support for *H6* that CGI positively moderates the SBD-FP link. This evidence suggests that the sustainability-for-performance (SPS) is contingent on the quality of banks internal governance structures in the banking system in the ESSA countries.

Table 6.4: The moderating effect of CGI on the sustainability-for-performance link with clustered errors

Dependent Variable	(1) ROA	(2) ROE
Independent variables		
SBD	0.002	0.003
	(1.597)	(0.489)
CGI*SBD	0.048***	0.055***
	(2.678)	(3.491)
CGI	0.045***	0.012***
	(3.254)	(4.587)
Bank-level controls		
FSIZ	-0.078***	-0.169*
	(6.368)	(1.641)
LEV	-0.511*	0.034
	(1.774)	(0.124)
AGE	0.063*	0.042*
	(1.924)	(1.798)
CAP	-1.991***	-1.437***
	(4.223)	(4.830)
AFS	0.019	0.014
	(0.340)	(0.249)
R& D	0.026**	0.009
	(1.967)	(0.697)
Constant	-1.161**	0.391*
	(2.274)	(1.809)
Year fixed effect	Yes	Yes
Country effect	Yes	Yes
Observations	2027	2027
R-squared	0.219	0.249

*Notes: This table presents the OLS regression results on the effect of CGI on the SBD-FP nexus. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Return on assets (ROA), Return on equity (ROE), Sustainable banking disclosure (SBD), an interaction between SBD and CGI (SBD*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

In a similar vein, after examining the effect of the CGI on the SPS in the entire sample, the study conducted further analysis by dividing the sample into two main sub-groups: (i) better-governed banks (banks with a CGI value more than the average score of 64%); and (ii) poorly-governed banks (banks with a CGI value lower the mean score of 64%) as applied by Elmagrhi et al. (2020). The results in Table 6.5 lend empirical support for *H6* that CGI positively

moderates the relationship between SBD and FP, with the SPS being stronger in banks with high CGI score. The results in Table 6.5 show that the interaction variables CGI*SBD has positive and significant influence on the two components of FP (ROA and ROE) in all the four Models in Table 6.5.

Table 6.5: Break sample analysis of the moderating effect of CGI on the SBD-FP link with clustered errors

Dependent Variable	(1) ROA Good-governed banks	(2) ROA Poorly-governed banks	(3) ROE Good-governed banks	(4) ROE Poorly-governed banks
Independent variables				
SBD	0.007	0.001	0.003	0.002
	(1.574)	(1.612)	(1.347)	(1.587)
CGI*SBD	0.089***	0.002**	0.078***	0.001**
	(2.678)	(1.985)	(4.285)	(2.423)
CGI	0.052***	0.003***	0.024***	0.001***
	(3.897)	(2.984)	(3.657)	(2.841)
Bank-level controls				
FSIZ	-0.084***	-0.245*	-0.145*	-0.283
	(7.547)	(1.852)	(1.879)	(1.025)
LEV	-0.321*	-0.254	0.042	0.028
	(1.831)	(1.326)	(0.254)	(0.117)
AGE	0.084**	0.024*	0.038*	0.032*
	(2.564)	(1.624)	(1.664)	(1.641)
CAP	-0.789**	-1.985**	-1.348***	-1.548**
	(5.845)	(2.145)	(3.541)	(2.548)
AFS	0.065	0.024	0.022	0.001
	(0.868)	(0.187)	(0.235)	(0.148)
R& D	0.058***	0.010*	0.010	0.002
	(2.054)	(1.654)	(0.671)	(0.587)
Constant	-1.236***	-1.564**	0.229**	0.148**
	(5.352)	(2.458)	(2.148)	(1.987)
Year fixed effect	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
Observations	1166	861	1166	861
R-squared	0.358	0.267	0.301	0.215

Notes: *This table presents the OLS regression results on the effect of CGI on the SBD-FP nexus in the sub-sample. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Return on assets (ROA), Return on equity (ROE), Sustainable banking disclosure (SBD), an interaction between SBD and CGI (SBD*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Of special note, the magnitude of the coefficient of the CGI*SBD on ROA increased from 0.048 in Model 1 of Table 6.4 (entire sample), to 0.089 in Model 1 of Table 6.5 (better-governed banks) but decreased in magnitude to 0.002 in Table 6.5 (poorly-governed banks). Similar to the results of ROA, the magnitude of the coefficient of the CGI*SBD on ROE also increased from 0.055 in Model 2 of Table 6.4 to 0.078 in Model 3 of Table 6.5 but reduced to 0.001 in Model 4 of Table 6.5, respectively. The implication is that bank-level CGI moderates the sustainability-for-performance sensitivity, with the SPS being stronger in banks with high CGI score (Elmagrhi et al., 2020). It is evidently observable from the findings that, irrespective

of the FP measure employed, the sustainability-for-performance sensitivity has noticeably improved in better-governed banks, suggesting that *H6* is empirically supported.

Theoretically, the findings are consistent with the predictions of NIT, which highlights efficiency and legitimation impact of SBD investments on FP in the banking system. The implication of the findings is that, in better-governed banks, senior managers are more likely to undertake SBD initiatives which can legitimize the banks' operations. In addition, this ensures congruence with stakeholder interest and high-order value (Ntim & Soobaroyem, 2013; Aguilera et al., 2007). Based on efficiency NIT purview, the findings indicate that better-governed banks have greater propensity to undertake more SBD, which enhances corporate efficiency and FP. Hence, CGI can act as a crucial positive catalyst on the SPS by minimizing conflict of interest among several stakeholders (e.g., Ntim & Soobaroyem, 2013; Jo & Harjoto, 2011).

6.4. Robustness checks

The study conducts additional analyses to check the robustness of the findings. To begin with, it is possible that the relationships that the study reports between banks' CGI and their SBD are being driven by a reverse causality or by a latent variable (Jiang et al., 2015). Prior studies address this endogeneity issues by using a two-stage least squares (2SLS) approach, and so the study adopts similar approach (Jian et al., 2015; Choi et al., 2013). However, choosing an appropriate instrument for a 2SLS model is often a challenge (Jian et al., 2015). Previous researchers (e.g., Choi et al., 2013; Ntim & Soobaroyem, 2013; Ntim, 2009) used one or two-year lagged levels of CG as primary instrument.

Similarly, this study proposes that lagged CGI could be appropriate instruments for the study. This is because the study anticipates that the CGI is endogenous, and hence a lagged CGI is used as instrumental variable for the endogenous CGI variable. In each of the models, the Durbin score and Wu-Hausman endogeneity tests are used to assess the appropriateness of using the 2SLS approach. The results of the Durbin score and Wu-Hauman statistics show large P-values in some of the Models, which suggest that the study fail to reject the null hypothesis that the variables are exogenous.

Firstly, the endogeneity test results confirm that the CGI variable in all the Models are exogenous, suggesting that the OLS estimates are reliable. However, the study conducted the 2SLS estimation approach to make the findings of the thesis comparable to prior studies such as Choi et al. (2013) and Brick and Chidambaran (2010). The results in Table 6.6 (Model 1 to

Model 3) reveal that the coefficients of CGI on SBD are positive and significant, thereby suggesting that the evidence that CGI has positive impact on SBD is robust to latent endogeneities that may arise from omitted variables. Further, the results in Table 6.6 are also comparable to the findings reported in Models 1, 2 and 3 of Table 6.1. For example, the coefficient of CGI on SBD in Model 2 (better-governed banks) is higher in magnitude (0.346) than the coefficient in Model 3 (poorly-governed banks) of 0.021.

Table 6.6: Effect of CGI on SBD nexus using 2SLS regression approach

Dep. Variable (Model)	SBD (1)	**Better-governed** (2)	**Poorly-governed** (3)
Corporate governance index:			
CGI	0.076***	0.346***	0.021***
	(3.98)	(4.89)	(1.98)
Controls:			
FSIZ	-0.412***	-0.436***	-0.386***
	(3.95)	(3.67)	(3.74)
LEV	-0.114	-0.547	-0.443
	(0.05)	(0.15)	(0.28)
AGE	1.359***	1.924***	1.542***
	(4.96)	(8.45)	(3.89)
CAP	-0.463***	-0.547***	-0.954**
	(2.90)	(5.38) ***	(2.18)
AFS	2.115**	1.674***	0.547
	(2.18)	(3.65)	(1.48)
R&D	0.332***	0.824***	0.457 **
	(2.96)	(3.24)	(2.57)
Year fixed effect	Yes	Yes	Yes
Country effect	Yes	Yes	Yes
Constant	7.221 ***	0.789***	0.874***
	(9.619)	(8.978)	(8.412)
Partial R-Sq	0.735	0.634	0.622
F-sta	4948.25	214.10	213.93
Endogeneity	0.172	0.161	0.176
No. of observations	1820	963	720

*Notes: This table presents the 2SLS regression results on the impact of CGI on SBD. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Sustainable banking disclosure (SBD), Corporate governance disclosure index (CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Secondly, the endogeneity test results in Table 6.7 confirm that the CGI variables in all the Models are exogenous except in Model 5, suggesting that the Ordinary Least Squares estimates are reliable. In Model 5 of Table 6.7, the Durbin score and Wu-Hausman statistics have small p-values; hence, the test rejects the null hypothesis that the variables are exogenous, and the study was right in treating CGI as endogenous variable. The implication is that the Ordinary Least Squares results may be misleading and that the 2SLS approach should be adopted for the analysis (McGuineness et al., 2017; Choi et al., 2013). Due to the lagged variables, the number

of observations reduced to 1820 in the 2SLS regressions. In the first stage regression, the study tests if the instruments used are weak. The results in all the Models show that, the partial R-square which measures the correlation between the CGI and lagged CGI variables are high (partial R-Sq > 0.630). In addition, the F-statistics are also much higher than the critical values in all the Models. Thus, the test rejects the null hypothesis that instruments are weak, suggesting that the instruments have good explanatory power for the endogenous CGI variable.

Table 6.7: Effect of CGI on individual dimensions of SBD nexus using 2SLS regression with clustered errors

Dependent Variable	(1) ENV	(2) SOC	(3) HAS	(4) EHR	(5) CIV	(6) EMP
Independent variables						
CGI	-0.01	0.100***	0.122***	-0.023	0.081	0.107***
	(0.24)	(3.47)	(6.30)	(0.64)	(0.91)	(4.11)
Bank-level controls						
FSIZ	-0.543***	-0.388**	-0.163	-0.547***	-0.868****	-0.241*
	(2.85)	(2.15)	(1.55)	(2.85)	(5.74)	(1.71)
LEV	-0.217*	-0.368**	-0.899**	-0.109	-0.744	-0.413*
	(1.66)	(2.06)	(2.04)	(1.39)	(1.37)	(1.99)
AGE	0.262	2.809***	0.785***	0.422	1.758***	0.783***
	(0.52)	(6.81)	(2.84)	(0.83)	(4.42)	(7.49)
CAP	-0.573***	0.741***	-1.436	-0.932***	-0.767***	-0.882*
	(4.83)	(3.19)	(1.19)	(4.95)	(4.46)	(1.78)
AFS	0.541	2.048	1.975**	1.619	2.013	2.529*
	(1.43)	(1.40)	(2.02)	(0.90)	(1.43)	(1.92)
R & D	0.689***	0.454***	0.129	0.218	0.142	0.441***
	(3.36)	(2.69)	(1.15)	(1.05)	(0.87)	(2.90)
Constant	0.843***	0.452***	0.991***	0.150***	0.955***	0.701**
	(3.43)	(3.17)	(3.40)	(3.66)	(2.67)	(2.28)
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1820	1820	1810	1820	1820	1820
Partial R-sq	0.736	0.735	0.736	0.736	0.734	0.735
F-sta	4948.25	4948.25	4948.25	4948.25	4948.25	4948.25
Endogeneity	0.355	0.936	0.163	0.789	0.008	0.167

*Notes: This table presents the 2SLS regression results on the impact of CGI on SBD sub-indices. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Environmental score (ENV), Social investment and service quality score (SOC), Health and safety score (HAS), Community involvement score (CIV); Ethics and human rights score (EHR), employee score (EMP), Corporate governance disclosure index (CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

The results in Table 6.7 above reveal that the coefficients of CGI on SOC, HAS and EMP are positive and significant, suggesting that the evidence that CGI has positive impact on these dimensions of SBD is robust to possible endogeneities that may arise from omitted variables. The association between CGI and CIV is positive but insignificant. Similarly, CGI has negative but insignificant link with ENV and EHR in Model 1 and 4 of Table 6.7, respectively. In all,

the results contained in Models 1 to 6 of Table 6.7 are fairly consistent with the findings reported in Table 6.2 (Models 1 to 6).

Thirdly, following prior studies and in order to account for a potential endogeneity between SBD and FP, the study employs a 2SLS regression with a one-year lagged value of the SBD and all the control variables as instrumental variables (e.g., Platonova et al., 2018; Ntim & Soobaroyem, 2013). The result of the Durbin-Wu-Hausman test rejects the null hypothesis of exogenous variables. Hence, the study concludes that OLS results may be biased and inconsistent.

The study estimates Eq. (10) using 2SLS to deal with any probable endogeneity between SBD and FP. Specifically, Models 1 and 2 of Table 6.8 present the results of the effect of SBD on return on assets, whilst Models 3 and 4 of the table provide the impact of SBD on return on equity. The result in Model 1 indicates that the coefficient of SBD on ROA is positive and significant at the 5% level. However, the result in Model 3 of Table 6.8 shows that, the coefficient of SBD on ROE is positive but statistically insignificant as reported in the main analysis in Model 3 of Table 6.3. These findings reaffirm the OLS results reported in Table 6.3.

For a deeper analysis, the thesis examines the impact of the various components of SBD (ENV, SOC, HAS, EHR, CIV and EMP) on the two components of FP (ROA and ROE) using a 2SLS approach. The results these investigations are reported in Table 6.8. In Model 2, the results show that both SOC and EHR dimension of SBD have positive and significant influence on ROA, whilst HAS is negatively associated with ROA. However, ENV, CIV and EMP have no influence on ROA. Also, the results in Model 4 of Table 6.8 indicate that SOC, EHR and EMP are positively and significantly associated with ROE, whereas ENV, HAS and CIV have negative associations with ROE. Together, the 2SLS reported in Table 6.8 are consistent with the main models in Table 6.3 as the estimated coefficients are comparable to those from OLS regression results and the significance levels generally comparable.

Table 6.8: Effect of SBD on FP using 2SLS regression approach with clustered error

Dependent Variable	(1) ROA	(2) ROA	(3) ROE	(4) ROE
Independent variables				
SBD	0.006**		0.003	
	(1.98)		(0.77)	
ENV		-0.005		-0.013***
		(1.44)		(3.81)
SOC		0.017***		0.014***
		(6.08)		(5.54)

HAS		-0.013***		-0.008*
		(2.76)		(1.82)
EHR		0.007**		0.011***
		(2.12)		(3.63)
CIV		-0.003		-0.006**
		(1.19)		(2.66)
EMP		0.003		0.001*
		(0.87)		(1.72)
Bank-level controls				
FSIZ	-0.006	-0.009	-0.018*	-0.012
	(0.57)	(0.85)	(1.78)	(1.10)
LEV	-0.644**	-0.557*	-0.169	-0.083
	(2.18)	(1.88)	(0.62)	(0.30)
AGE	0.091***	0.087**	0.059*	0.055*
	(2.64)	(2.45)	(1.84)	(1.66)
CAP	-2.110***	-1.959***	-1.382***	1.550***
	(13.58)	(12.48)	(9.58)	(10.67)
AFS	-0.126	-0.119	-0.034	-0.021
	(0.99)	(0.88)	(0.29)	(0.18)
R& D	0.002	0.008	0.013	-0.004
	(0.14)	(1.60)	(1.07)	(0.31)
Constant	-4.045***	0.958***	1.996***	1.986***
	(11.26)	(10.93)	(5.98)	(5.92)
Year dummy	Yes	Yes	Yes	Yes
Country dummy	Yes	Yes	Yes	Yes
Observations	1820	1820	1820	1820
Partial R-squared	0.836	0.579	0.836	0.579
F-sta	1307.38	188.57	1306.55	188.42
Endogeneity	0.158	0.029	0.083	0.001

*Notes: This table presents the 2SLS regression results on the effect of sustainable banking disclosures on financial performance. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Return on assets (ROA), Return on equity, Sustainable banking disclosure, Environmental score (ENV), Social investment and service quality score (SOC), Health and safety score (HAS), Community involvement score (CIV); Ethics and human rights score (EHR), employee score (EMP), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Fourth, it has been suggested that it is possible to have a time lag between the possible impact of sustainable banking initiatives on financial performance in the banking system. In this case, the current years' SBD may be associated with the following years' FP (e.g., Platonova et al., 2018; Choi et al., 2013). This is because the benefits of sustainable banking initiative may not materialise immediately. Further, it also possible for banks with better current SBD to improve their internal CG mechanisms in the following year as a way of attracting critical resources, as well as to increase their FP (e.g., Hoi et al., 2013; Ntim & Soobaroyen, 2013; Larcker & Rusticus, 2010; Chenhall & Moers, 2007). To test simultaneity problems that may arise due to the presence of a lagged sustainability-for-performance sensitivity (SPS), the study follows prior studies (e.g., Choi et al., 2013; Ntim & Soobaroyen, 2013), to re-estimate Eq. (11) as a lagged structure as specified below:

$$FP_{it} = f\begin{pmatrix} \text{CGI SCORES}_{it\text{-}1} \\ \text{SBD SCORES}_{it\text{-}1} \\ \text{CGI SCORES}_{it\text{-}1} \times \text{SBD SCORES}_{it\text{-}1} \end{pmatrix} + \text{CONTROLS}_{it\text{-}1} \quad \text{[Eqn 17]}$$

Where everything remains the same as specified in Eq. (11) except that the study includes a one-year between the FP on the left side of the equation and, the interaction variable CGI*SBD and other control variables on the right side of the equation. Thus, the current years' FP of banks depends on previous years' CGI*SBD. The results of the lagged investigations are presented in Models 1 and 2 of Table 6.9. The positive coefficient of the interaction variable CGI*SBD on both ROA (0.034, t = 1.789) and ROE (0.030, t = 1.744) are noticeable in Model 1 and 2 of Table 6.9, respectively. Importantly, these findings are consistent with those reported in the un-lagged Models 1 and 2 of Table 6.4. The results of the bank-specific control variables in Table 6.9 are also reinforced by the results of the bank-specific control variables in Table 6.4. Specifically, the control variables exhibit the same sign and significance as reported in the un-lagged structure. Overall, the similarity of evidence of lagged and un-lagged structures for the two models reaffirms that the original evidence of the positive moderation effect of CGI on the sustainability-for-performance sensitivity is robust.

Table 6.9: Moderation effect of CGI on the SBD-FP nexus using lagged regression with clustered errors

Dependent Variable	(1) ROA	(2) ROE
Independent variables		
SBD	0.004	0.005
	(1.489)	(1.358)
CGI*SBD	0.034*	0.030*
	(1.789)	(1.754)
CGI	0.039***	0.022***
	(2.987)	(3.541)
Bank-level controls		
FSIZ	-0.038***	-0.002
	(3.110)	(0.206)
LEV	-0.627**	0.186
	(2.096)	(0.666)
AGE	0.043	0.033
	(1.258)	(1.052)
CAP	-1.672***	-0.854***
	(11.469)	(6.290)
AFS	0.079	0.016
	(1.081)	(0.238)
R & D	0.004	0.011
	(0.333)	(0.862)
Constant	-2.698***	0.614*
	(5.069)	(1.845)
Year fixed effect	Yes	Yes
Country effect	Yes	Yes
Observations	2026	2026

R-squared	0.278	0.257

*Notes: This table presents the lagged regression results on the effect of CGI on the SBD-FP nexus. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Return on assets (ROA), Return on equity (ROE), Sustainable banking disclosure (SBD), an interaction between SBD and CGI (SBD*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Next, in order to account for potential endogeneities that may be caused by omitted variable bias, the study employs 2SLS approach as robust test. In particular, the study follows prior corporate governance studies that also adopted 2SLS technique to address potential endogeneity problems (e.g., Ntim et al., 2019; McGuinness et al., 2017; Choi et al., 2013; Brick & Chidambaran et al., 2010). In the regression, the SBD, CGI, and CGI*SBD variables are assumed to be endogenous. In the 2SLS regression, a one-year lagged value of the CGI*SBD, CGI and SBD variables are used as the instrumental variables as applied by Choi et al. (2013). After controlling for endogeneity, the results in Table 6.10 show that the impact of SBD on FP is positively and significantly moderated by CGI, and this association is robust to potential endogeneities that may arise from omitted variables. Specifically, in Model 1 of Table 6.10, the interaction term CGI*SBD has a positive and significant association with ROA (β =0.020, t = 2.72). Similarly, the results in Model 2 of Table 6.10 indicate that, the interaction term CGI*SBD is positively and significantly associated with ROE (β =0.025, t = 3.94). The evidence is consistent with that of the Ordinary Least Squares regression results reported in Table 6.4, which confirms that *H6* holds regardless of the regression method employed.

Table 6.10: Moderation effect of CGI on the SBD-FP nexus using 2SLS regression with clustered errors

Dependent Variable	(1) ROA	(2) ROE
Independent variables		
SBD	0.006	0.004
	(1.364)	(0.897)
CGI*SBD	0.020***	0.025***
	(2.72)	(3.94)
CGI	0.051***	0.062***
	(3.451)	(4.854)
Bank-level controls		
FSIZ	-0.004	-0.021***
	(0.38)	(2.06)
LEV	-0.520*	-0.053
	(1.75)	(0.19)
AGE	0.087***	0.053*
	(2.53)	(1.65)
CAP	-2.069***	-1.434***
	(13.31)	(9.93)
AFS	0.124	-0.036
	(0.98)	(0.31)
R& D	0.004	0.010
	(0.27)	(0.410)
Constant	-2.579***	0.152**

	(4.32)	(2.27)
Year fixed effect	Yes	Yes
Country effect	Yes	Yes
Observations	1820	1820
Partial R-sq	0.726	0.725
F-stat	1491.69	1490.80
Endogeneity	0.203	0.029

*Notes: This table presents the 2SLS regression results on the effect of CGI on the SBD-FP nexus. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Return on assets (ROA), Return on equity (ROE), Sustainable banking disclosure (SBD), an interaction between SBD and CGI (SBD*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Again, the study conducts additional regression with regards to the sub-sample (better-governed banks and poorly-governed banks). Similarly, the study conducts a lag effect analysis where a current-year's FP is explained by prior year's interaction variable SBD*CGI and the control variables in line with prior CG studies (e.g., Elmagrhi et al., 2020; McGuinness et al., 2017; Ntim et al., 2015; Larcker & Rusticus, 2010). The results are provided in Models 1 to 6 of Table 6.11. The results in all the four Models are similar and comparable to the earlier findings reported in Table 6.5. For example, there is a positive and significant impact of the interaction variable SBD*CGI on both ROA and ROE in Models 1 to Model 4. More importantly, the results in Models 1 to 4 of Table 6.11 show that, the moderation effect of CGI on the SBD-FP nexus is higher in magnitude in the Model 1 (0.092) and Model 3 (0.081) for better-governed banks than in Model 2 (0.001) and Model 4 (0.002) in the case of poorly-governed banks. This shows that the findings are robust to estimating a lagged structure.

Table 6.11: Break sample analysis of the moderating effect of CGI on the SBD-FP link using lagged structure with clustered errors

Dependent Variable	(1) ROA Good-governed banks	(2) ROA Poorly-governed banks	(3) ROE Good-governed banks	(4) ROE Poorly-governed banks
Independent variables				
SBD	0.008	0.004	0.006	0.003
	(1.445)	(1.475)	(1.198)	(1.497)
CGI*SBD	0.092***	0.001*	0.081***	0.002**
	(3.214)	(1.865)	(3.897)	(2.567)
CGI	0.034**	0.005***	0.030***	0.002***
	(2.235)	(3.568)	(4.354)	(3.148)
Bank-level controls				
FSIZ	-0.075***	-0.324*	-0.129*	-0.358
	(4.647)	(1.765)	(1.751)	(0.897)
LEV	-0.248**	-0.198	0.021	0.087
	(2.548)	(1.478)	(0.597)	(0.587)
AGE	0.065**	0.036*	0.019*	0.065*
	(1.984)	(1.796)	(1.821)	(1.789)
CAP	-0.824***	-1.865***	-1.169***	-1.745***
	(3.354)	(3.425)	(2.987)	(3.574)
AFS	0.077	0.069	0.056	0.006
	(0.568)	(0.298)	(0.547)	(0.578)
R& D	0.046***	0.022	0.020	0.004
	(4.254)	(1.568)	(1.241)	(1.458)
Constant	-1.425***	-1.687***	0.358***	0.564***

	(4.568)	(3.684)	(3.284)	(2.874)
Year fixed effect	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
Observations	1165	860	1165	860
R-squared	0.326	0.259	0.324	0.256

Notes: *This table presents the lagged regression results on the effect of CGI on the SBD-FP nexus in the sub-sample. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Return on assets (ROA), Return on equity (ROE), Sustainable banking disclosure (SBD), an interaction between SBD and CGI (SBD*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Also, the study estimates Eq. (11) in the sub-sample using 2SLS approach to deal with any probable endogeneity between the interaction variable SBD*CGI and FP. The result of this investigation is provided in Table 6.12. Similarly, the results in Table 6.12 suggest that, the interaction variable SBD*CGI has positive and significant effect on ROA (Model 1 and 2) and ROE (Model 3 and 4). Likewise, the moderation effect of CGI on the sustainability-for-performance in better-governed banks (Models 1 and 3) are higher in magnitude (0.074) in Model 1 and (0.083) in Model 3 when compared with that of poorly-governed banks (0.003) in Model 2 and 4. Altogether, these findings are consistent with the results of the OLS analysis in Table 6.4.

Table 6.12: Break sample analysis of the moderating effect of CGI on the SBD-FP link using 2SLS approach with clustered errors

Dependent Variable	(1) ROA Good-governed banks	(2) ROA Poorly-governed banks	(3) ROE Good-governed banks	(4) ROE Poorly-governed banks
Independent variables				
SBD	0.005	0.002	0.004	0.001
	(1.09)	(0.98)	(1.34)	(1.39)
CGI*SBD	0.074**	0.003*	0.083***	0.003**
	(2.57)	(1.79)	(3.35)	(2.18)
CGI	0.010***	0.002***	0.036***	0.003***
	(2.854)	(2.75)	(2.98)	(3.42)
Bank-level controls				
FSIZ	-0.065***	-0.456*	-0.346*	-0.487
	(5.86)	(1.75)	(1.78)	(0.95)
LEV	-0.487*	-0.387	0.087	0.064
	(1.75)	(0.98)	(1.54)	(0.87)
AGE	0.036**	0.038	0.043*	0.058*
	(2.18)	(1.58)	(1.75)	(1.76)
CAP	-0.897***	-1.457**	-1.487***	-1.567***
	(3.28)	(2.03)	(4.54)	(2.69)
AFS	0.065	0.037	0.087	0.006
	(0.35)	(0.35)	(0.65)	(0.587)
R& D	0.068***	0.033*	0.024	0.05
	(2.58)	(1.76)	(0.89)	(0.698)
Constant	-1.324***	-1.487***	0.458***	0.568*
	(4.54)	(3.26)	(3.35)	(1.89)
Year fixed effect	Yes	Yes	Yes	Yes
Country effect	Yes	Yes	Yes	Yes
Observations	963	720	963	720
Partial R-squared	0.754	0.734	0.741	0.698
F-stat	1498.54	1498.21	1495.34	148.66
Endogeneity	0.354	0.315	0.068	0.052

Notes: *This table presents the lagged regression results on the effect of CGI on the SBD-FP nexus in the sub-sample. T-statistics are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. Standard errors are clustered by country and time. Variables are defined as follows: Return on assets (ROA), Return on equity (ROE), Sustainable banking disclosure (SBD),*

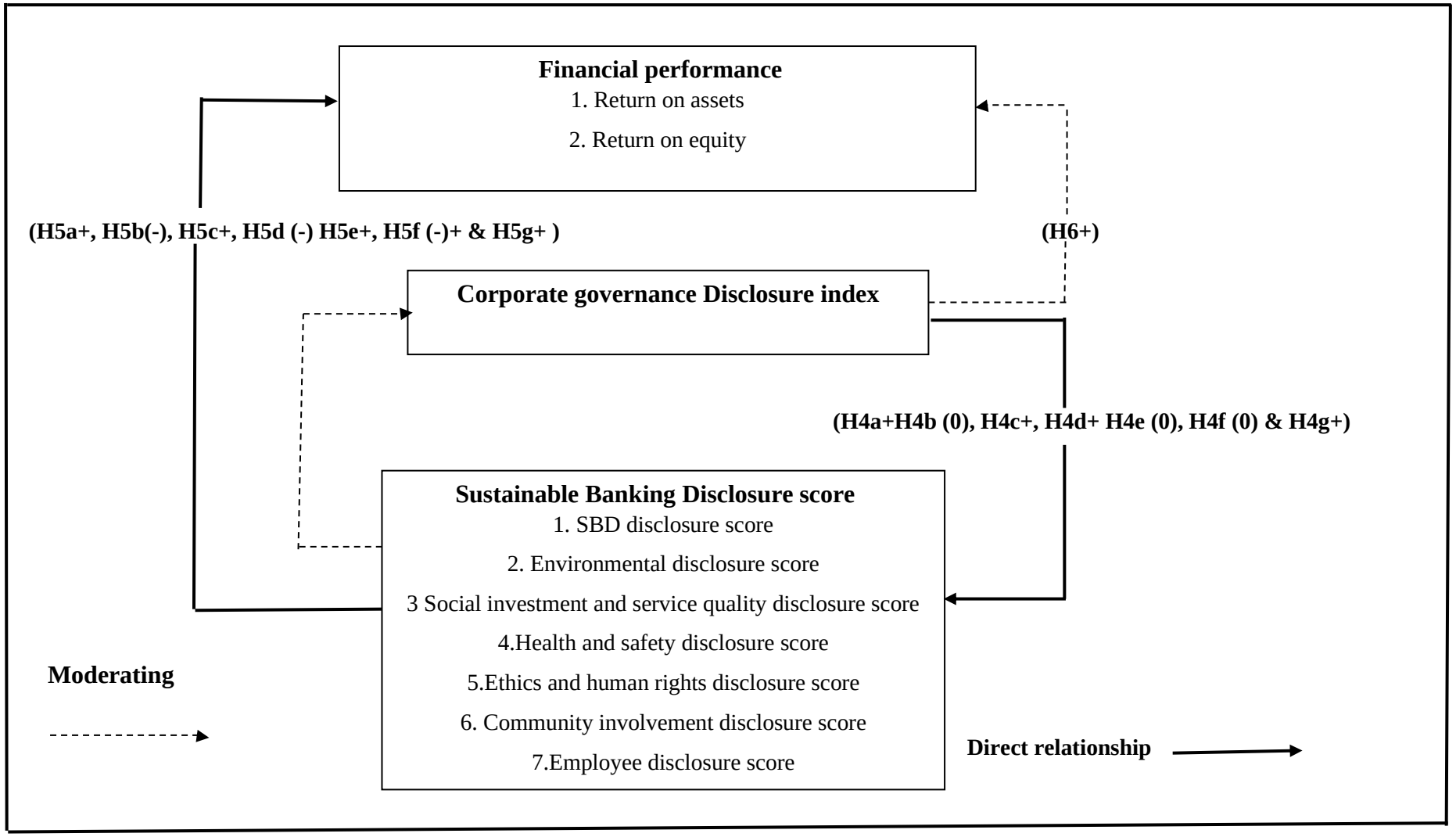
*an interaction between SBD and CGI (SBD*CGI), Firm size (FSIZ), Capitalization (CAP), Leverage (LEV), Age (AGE), Research and development (R&D) and Audit firm size (AFS). Full definitions of variables used are provided in Table 4.4.*

Overall, Fig 3.7 presents the actual conceptual framework obtained after investigating the association among corporate governance disclosure index, sustainable banking disclosures and financial performance in the ESSA banks. It shows how broad corporate governance disclosure index (CGI) is associated with an increase in sustainable disclosure index (SBD), social investment and service quality score (SOC), health and safety score (HAS) and employee score (EMP). This implies that *H4a*, *H4c*, *H4d* and *H4g* are accepted. However, the study finds no significant association between CGI and environmental score (ENV), ethics and human rights score (EHR) and community involvement (CIV), hence *H4b* (*0*), *H4e* (*0*) and *H4f* (*0*) are rejected.

It also shows how sustainable banking disclosure influences the financial performance of banks in the ESSA region. Specifically, Fig 3.7 shows that sustainable banking disclosure score, social investment and service quality score, ethics and human rights score and employee score are positively and significantly associated with the financial performance of banks. These suggest that *H5a* (+), *H5c* (+), *H5e* (+) and *H5g* (+) are accepted. However, Fig 3.7 show that environmental score, health and safety score and community involvement score are negatively and significantly associated with the financial performance of banks in the ESSA region. These suggest that *H5b* (-), *H5d* (-) and *H5f* (-) are rejected.

Finally, Fig 3.7 shows how the corporate governance disclosure index interact with sustainable banking disclosure score to enhance the sustainability-for-performance sensitivity (SPS) in the ESSA banking sector as highlighted in the hypothesis (*H6*). This suggests that *H6* is accepted.

Fig 3.7: Conceptual framework for the sustainability-for-performance sensitivity after the analysis



Chapter 7

7 Empirical results on the association among corporate governance, competition and bank risk-taking

This chapter focuses on providing empirical results on the association among corporate governance, competition and bank risk-taking in the ESSA banks. Specifically, section 7.1 provides the results on the association between corporate governance and bank risk-taking. Section 7.2 discusses the empirical findings on the impact of competition on bank risk-taking in the ESSA banking system.

7.1 The empirical findings of the effect of corporate governance on bank risk-taking

The internal governance structures of banks play a vital role with regards to controlling, monitoring and setting bank risk-taking behaviour (Ozkan, 2007). This implies that corporate governance is expected to safeguard the best interest of shareholders and all the other various stakeholders (Elmagrhi et al., 2020; Ozkan, 2007). Accordingly, the thesis investigates the impact of five key corporate governance structures including independent directors who are financial experts, number of board meetings, institutional ownership, government ownership and foreign ownership in the ESSA banking system.

7.2.1 The empirical findings of the effect of corporate governance on bank risk-taking

Table 7.1 provides the empirical findings of the influence of various components of corporate governance on bank risk-taking. More precisely, Table 7.1 provides the findings concerning the impact of board and ownership mechanisms on bank risk-taking (BRT) proxied by Z-score, non-performing loans (NPLs), loan-loss provision (LPROV) and capital adequacy ratio (CAR) as the dependent variables.

Firstly, previous research proposes that independent directors who are financial experts (EXPERT) may enhance the monitoring capacity of the board (Ntim et al., 2015; Jensen & Meckling, 1976). This can contribute towards reducing agency conflicts and thus prevent excessive BRT (Jensen & Meckling, 1976). To test this, the study examines the impact of EXPERT on BRT. The coefficients of EXPERT on Z-score and LPROV (-0.009 and -0.007) in Table 7.1 are negative and statistically significant at 1% respectively. However, the coefficients of EXPERT on NPLs and CAR although negative, however they are not statistically significant. Overall, the findings provide empirical support for *H7*, thus *H7* is accepted.

The evidence suggests that EXPERT serving on the board is a crucial governance tool that can enhance the board supervisory role and help reduce BRT. The evidence is consistent with the theoretical prediction of agency theory (AT) that EXPERT have appreciable knowledge and understanding of banking transactions which can lead to better oversight and reduce BRT (Garcia-Sanchez et al., 2017). The finding is also supported by resource dependence theory (RDT) that suggests that banks can benefit from the expertise of EXPERT in terms of early spotting of risk and preferring of risk-mitigation solutions. Further, stakeholder theory (SHT) suggests that the presence of EXPERT is essential in terms of protecting stakeholders' rights. The result corroborates empirical findings of prior studies which suggest EXPERT encourage managers to take less risk (e.g., Drobetz et al., 2018; Garcia-Sanchez et al., 2017).

Secondly, the findings in Table 7.1 provides empirical findings on the association between the number of board meetings (NBMs) on the four measures of BRT (Z-score, NPLs, LPROV and CAR). The results of the investigation reported in Table 7.1 point to the evidence that, the NBMs has a negative and statistically significant influence on Z-score and LPROV at 1% significance level. These findings partly support *H8*. However, NBMs has negative but insignificant relationship with NPLs and CAR, implying that H8 is not empirically supported. From AT perspective, as the NBMs increases, the monitoring activity of the board increases which translate into effective supervision and coordination, thereby limiting the scope of excessive BRT by managers. In addition, regular board meetings can enable the board to provide strategic advice on key investment decisions, as well as help identify valuable investment opportunities which can reduce BRT. The evidence confirms the findings of previous research that observe a negative link between NBMs and BRT (e.g., Battaglia & Gallo, 2017; Dong et al., 2017; Liang et al., 2013).

Thirdly, Table 7.1 also provides the findings of OLS regression of ownership variables institutional ownership (ISONR) government ownership (GOVNR) and foreign ownership (FONR) along with the control variables on BRT in the ESSA region. In connection with ownership mechanisms, the findings provided in Table 7.1 indicate that ISONR is negatively associated with the BRT. Specifically, ISONR is negatively and statistically associated with Z-score, NPLs and CAR at 1% respectively. These infer that *H9* is empirically supported. But, the insignificant impact of LPROV on BRT indicates that *H9* is rejected. The results support the theoretical prediction. For example, AT explains these findings by suggesting that institutional shareholders are better at monitoring senior managers from engaging in excessive risk-taking behaviour in the banking system (Ehsan & Javid, 2018), which limits BRT.

Table 7.1: Effect of various components of corporate governance variables on bank risk-taking with clustered errors

Variables	(1)		(2)		(3)		(4)	
	Z-score		NPLs		LPROV		CAR	
	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics
EXPERT	-0.009	3.134***	-0.0001	0.219	-0.007	2.189**	-0.001	0.067
	(0.003)		(0.001)		(0.025)		(0.016)	
NBMs	-0.336	2.289**	-0.040	0.393	-0.743	2.683***	-0.834	0.953
	(0.147)		(0.119)		(0.396)		(0.875)	
ISONR	-0.005	3.795***	-0.003	3.505***	-0.002	0.163	-0.015	2.291**
	(0.001)		(0.001)		(0.011)		(0.007)	
GOVNR	0.003	1.701*	0.007	5.106***	0.014	0.839	0.002	0.144
	(0.002)		(0.001)		(0.018)		(0.011)	
FONR	0.005	3.782***	0.003	3.510***	0.002	0.157	0.015	2.278**
	(0.001)		(0.001)		(0.011)		(0.007)	
BSIZE	0.231	2.015**	0.113	1.723*	0.306	0.304	1.435	2.277**
	(0.115)		(0.083)		(0.004)		(0.630)	
BDIVG	-0.001	0.533	-0.0003	0.184	-0.017	0.766	-0.008	0.586
	(0.002)		(0.002)		(0.023)		(0.015)	
FSIZ	-0.061	3.775***	-0.004	2.372**	-0.171	1.204	-0.027	0.456
	(0.016)		(0.011)		(0.142)		(0.089)	
CAP	-0.001	0.028	-0.346	2.359**	-0.163	0.640	-0.153	1.012
	(0.001)		(0.146)		(0.815)		(0.139)	
LIQ	0.058	2.716***	0.136	3.653***	0.355	2.166**	0.3002	1.678*
	(0.427)		(0.311)		(0.732)		(0.341)	
AGE	0.111	2.301**	0.007	2.077**	0.074	1.715*	0.151	1.671*
	(0.048)		(0.003)		(0.421)		(0.264)	
Constant	-3.913	8.769***	1.519	4.823***	1.182	6.718***	5.003	2.394**
YDU	Yes		Yes		Yes		Yes	
CDU	Yes		Yes		Yes		Yes	
Observations	2027		2027		2027		2027	
R-squared	0.448		0.423		0.414		0.467	

*Notes: This table presents the OLS regression results on the impact of board and bank ownership structures on bank risk-taking proxies. Standard errors are clustered by country and time which are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. The definitions of the variables used in the analysis are provided in Table 4.4. Variables are defined as follows: Individual financial directors who are financial experts (EXPERTS), number of board meetings (NBMs), institutional ownership (ISONR), government ownership (GOVNR), Foreign ownership (FONR), board size (BSIZE), board gender diversity (BGDIVG), firm size (FSIZ), capitalization (CAP), liquidity (LIQ) and age (AGE).*

In addition, SHT also predicts that when institutional investor's stakes increase, there is the tendency for them to join forces with management to safeguard their investments and this may curtail excessive BRT (Boubakri et al., 2013). The findings confirm the evidence of prior studies that document negative link between ISONR and BRT (Ellul & Yerramilli, 2013; Garcia-Marco & Robles-Fernandez, 2008; Knopf & Teall, 1996).

Fourth, Table 7.1 results report that GOVNR exhibits a significant positive association with Z-score and NPLs. This implies that *H10* is accepted. However, the results in Table 7.1 (Model 3 and 4) show that GOVNR has no significant association with CAR and LPROV. These findings imply that *H10* is partly rejected. This evidence supports the argument that government ownership in the ESSA countries encourage banks to take more risk. Moreover, these findings are in line with the theoretical prediction of AT that, banks with substantial government ownership engage in excessive BRT. This is because, it allows government to finance risky and non-profitable projects aimed at ensuring the government re-election and political tenure (Boubakri et al., 2013). The finding corroborates evidence of previous research (e.g., Tabak et al., 2015; Chou & Lin, 2011; Iannottaa et al., 2007; Micco et al., 2007).

Fifth, the results in Model 1, 2 and 4 in Table 7.1 indicate that FONR has positive association with Z-score, NPLs and CAR, respectively. This results offer empirical support for *H11*. Nevertheless, the results in Model 3 of Table 7.1 reveal a positive association between FONR and LPROV, however the relationship is insignificant, implying that *H11* is partly rejected. The positive relationship is also supported by AT, which suggests that foreign banks encounter liabilities of foreignness because of inherent difficulties in recognizing and accustoming to the domestic country regulations and procedures (Kobeissi & Sun, 2010). This difficulty is even heightened in emerging economies, such as ESSA, where there is virtually no reliable credit history of borrowers (Andrianova et al., 2015). These results also confirm the theoretical proposition of AT notion that foreign investors directly increase BRT through risk-shifting approach (e.g., Boubakri et al., 2013; Jensen & Heckling, 1976).

Finally, concerning bank-specific control variables, the results in Table 7.1 show that BSIZE has positive effect on Z-score, NPLs and CAR. The evidence shows that BSIZE increases BRT in the region. The results in the table also suggest that BDIVG has negative but insignificant effect on all the BRT proxies. Generally, banks in the region have low representation of female directors on their boards. This can partly explain the insignificant relationship between BDIVG and BRT in ESSA banks. The findings of the other bank-specific control variables are largely

consistent with the predicted signs. For example, firm size has negative impact on BRT which suggests that large banks tend to have low BRT. The evidence supports Delis (2012) suggestion that that large banks have access to low cost capital owing to lower information asymmetries and superior risk-management capacities. For example, larger banks have lower NPLs, it seems stronger financial position and better managerial ability at large banks play a role in mitigating risk-taking behaviour in ESSA region. Contrary to the prediction of the study, bank age seems to be positively connected with the BRT measures, suggesting that older banks engage in more BRT than younger banks. This does not support the "older bank hypothesis" that older banks are safer because they have good lending relationships with their customers. The evidence confirms previous research that observes a weak link between bank age and BRT in emerging economies (see Karim et al., 2010).

The findings reveal that LIQ has a linear relationship with BRT in the ESSA banks. This indicates that liquid banks tend to increase risk-taking due to the greater opportunities for them to augment the size of their market share. The evidence does not support the findings of Mustapha &Toci (2018) that liquid banks charge low interest rates on loans, which tend to attract less risky projects and hence low default rate. The coefficient of CAP is significantly negative in the Model 2. This imply that that well-capitalized banks are associated with reduced risk-taking in the region. This supports the evidence of Mustapha &Toci (2018) who report that banks with high CAP tend to engage in less BRT. The risk-taking behavior in the banking system is considerably dependent on the amount of equity holdings by the banks (Mustapha & Toci, 2018). Banks with high capital ratio tend to be conservative in risk-taking as a way of preserving shareholders value (Mustapha & Toci, 2018).

7.2 The empirical findings of the effect of competition on bank risk-taking

The empirical findings of competition measures together with the bank-specific control variables on BRT are provided in Table 7.2. The table presents generalized method of moments (GMM) results of four estimates concerning Z-score, NPLs, LPROV and CAR. The coefficients of competition measured by LERNER on Z-score, NPLs, LPROV and CAR (0.049, 0.026, 0.054 and 0.236) in Table 7.2 are statistically positive at 1%. (Model 1-3) and 5% Model 4, respectively. The results provide strong empirical support for *H12*. The evidence shows that competition measured by LERNER increases BRT in the ESSA countries regardless of the BRT proxies.

Table 7.2: Dynamic GMM regression results of the effect of competition on bank risk-taking

Variables	(1)		(2)		(3)		(4)	
	Z-score		NPLs		LPROV		CAR	
	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics
LERNER	0.049	2.725***	0.026	5.360***	0.054	2.810***	0.236	1.960**
	(0.022)		(0.005)		(0.027)		(0.123)	
HSTAT	0.028	4.570***	0.020	1.645*	0.139	1.060	0.010	0.530
	(0.060)		(0.015)		(0.131)		(0.163)	
FSIZ	-0.167	3.090***	-0.037	1.968**	-0.054	2.240**	-0.462	1.980**
	(0.054)		(0.039)		(0.485)		(0.241)	
CAP	-0.228	0.870	-0.404	1.680*	-1.470	2.148**	-1.697	1.680*
	(0.264)		(0.256)		(0.459)		(1.044)	
LIQ	0.439	1.810*	0.089	0.210	0.129	1.979**	0.125	2.26**
	(0.356)		(0.418)		(0.484)		(0.889)	
AGE	0.113	2.170**	0.015	2.07**	0.761	1.790*	0.007	1.203
	(0.052)		(0.084)		(0.426)		(0.241)	
YDU	Yes		Yes		Yes		Yes	
AR1	0.000		0.002		0.013		0.026	
AR2 (prob.)	0.336		0.139		0.541		0.913	
Hansen J (prob)	0.489		0.215		0.681		0.647	
Obs	1779		1779		1779		1779	

*Standard errors robust to heteroscedasticity are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. AR1 and AR2, respectively denote tests for first-order and second-order serial correlation in the first-differenced residuals under the null hypothesis of no serial correlation. The Hansen denotes a test of over-identifying restrictions under the null hypothesis of overall validity of instruments used. The definitions of the variables used in the analysis are provided in Table 4.4. Variables are defined as follows: Non-performing loans (NPLs), loan loss provision (LPROV). Capital adequacy ratio (CAR), Lerner index (LERNER), H-statistics (HSTAT), firm size (FSIZ), capitalization (CAP), liquidity (LIQ) and age (AGE).*

Similarly, HSTAT exhibits a positive association with all the bank risk-taking proxies, however, the association with LPROV and CAR is statistically insignificant. Hence, the evidence reveals that competition measured by HSTAT positively impact on BRT measured by Z-score and NPLs. The findings suggest that as competition intensifies in the ESSA banking system, the propensity of the banks to increase their risk-taking also increases. The results lend further support to *H12*.

The evidence is consistent with "competition-fragility" view; however, it is in sharp contrast with 'competition-stability" view. Briefly, "competition-fragility" view articulates that increasing competition in the banking system stimulates bank to engage in excessive risk-taking (Keeley, 1999). This is grounded on the argument that increasing competition in the banking system provides several lending avenues to banks which lowers prudent lending. At the same time, an increase in competition decreases the profit of banks, erodes their charter values and pushing banks to ignore prudent lending, thereby resulting in a deterioration of excessive BRT. Within ESSA context, the positive competition-NPLs nexus suggests that as competition increases in the deposit market, banks pay higher deposit rate. They face higher repayment burden, hence the banks charge high loan rate which attract high risky investments. Borrowers of the bank therefore assume greater risk, thereby increasing NPLs in the banking system in the region. Tongurai & Vithessonthi (2020) suggest that the probability for borrower's business ventures to succeed decreases as the interest rates they pay on loans increase.

Primarily banks in the ESSA region increase their interest rates due to intense competition in the deposit market. The increase in interest rate reduces earnings on undertaken projects by borrowers (Tongurai & Vithessonthi, 2020). This motivates borrowers to opt for business opportunities that tend to have reduced chances of success. However, these high risk projects tend to have substantial earnings if successful (Tongurai & Vithessonthi, 2020). Subsequently, this shift of borrowers of bank risk-taking behaviour due to rising interest rate may translate into a high NPLs levels in the ESSA banking system.

In addition, due to the intense competition in the loan market in the region, the banks tend to have looser acceptance criteria for granting loans to attract more demand (Bolt & Tieman, 2004). This reduces the quality of the banks' loan portfolio which gives rise to higher default probabilities in the region. The evidence reaffirms the work of Akande et al. (2018) who show that although deposit insurance which motivates banks to engage in excessive BRT is yet to be

a popular phenomenon in the region, BRT in the region has been linked to moral hazard behaviour. Consequently, banks in the region tend to act less prudently because the government and depositors hold responsibility for their actions. The result is consistent with previous investigations that show that competition increases BRT in emerging economies (e.g., Noman et al., 2017; Kabir & Worthington, 2017). On the contrary, the findings differ from studies that establish a negative relationship between competition and BRT in developing economies (e.g., Sarkar & Sensarma, 2016; Tabak et al., 2015)

With respect with the bank-specific control variables, first the coefficient of FSIZ which measures the size of the bank, has a negative coefficient across all the models. This suggests that larger banks are linked with low BRT propensity. Larger banks reduce their risk-taking so as to be safe. This may be in part attributed to the advantage that large banks have in terms of possessing borrower-specific information, superior risk-management capacities stemming from their strong financial position (Toci & Mustapha, 2018).

Second, other control variables that have statistically significant relationship with the BRT measures are liquidity and age. For instance, bank age seems to have a positive link with BRT measures, suggesting that older banks engage in more BRT than younger banks. This does not support the "older bank hypothesis" that older banks are safer because they have good lending relationships with their customers. In particular, Karim et al. (2010) document that age has a weak linear link with BRT in the Malaysian banking sector. Liquidity also has a positive impact BRT in all the Models. Thus, it seems that highly liquid banks in the region have a tendency to take more risk in order to grow their market share. The implication is that managers of these banks may choose to deviate from appropriate screening, hence facilitating low-quality borrower's access to credit.

In addition, capitalization has the predicted sign, but the link with BRT is found to be insignificant in all the Models except in Models 2 and 3. Generally, the findings contained in Table 7.2 reveal that as competition intensifies in the ESSA banking system, bank risk-taking behaviour also increases, after taking into consideration bank and country specific control variables. This evidence is consistent with the findings of previous research that establish a positive link between competition and BRT (e.g., Tongurai & Vithessonthi, 2020; Akande et al., 2018; Berger et al., 2009).

7.3 Robustness checks

Finally, the study conducted further analysis to ascertain the robustness of the findings reported earlier. It is possible that the relationships that the study report between the CG variables and BRT are being driven by reverse causality or by latent variable (see Jiang et al., 2015). Notably, previous scholars (see Jiang et al., 2015, Choi et al., 2013, Hilary & Hui, 2009) address such endogeneity concern by employing a two-stage least squares (2SLS) approach, and so the study adopt their approach. Prior studies used lagged one-year lagged levels of the CG variables as primary instruments (e.g., Choi et al., 2013). Similarly, the study proposes that lagged CG variables could be appropriate instruments for the endogenous CG variables. The result for the 2SLS estimation is presented in Table 7.3. For each of the Models, the Hausman endogeneity test is employed to ascertain the appropriateness of using the 2SLS approach. The results of the Hausman endogeneity test confirm that the CG variables in all the four models are endogenous. This evidence supports the use of 2SLS technique in the robust analysis with lagged of the CG variables as instruments consistent with previous research (e.g., McGuinness et al., 2017; Choi et al., 2013).

The results reported in Models 1 to 4 of Table 7.3 show that, the 2SLS findings are consistent with those reported findings in Table 7.1. For example, the results show that EXPERT has negative effect on BRT in Models 1 and 4 similar to the earlier findings. Consistent with the OLS results, the table shows that NBMs has an inverse relationship with BRT in Models 1 and 3 of Table 7.1. In respect of ownership variables, the results in Table 7.3 suggest a negative relationship between ISONR and the three of the bank risk-taking measures (Z-score, NPLs and CAR) in Models 1, 2 and 4 respectively, thus confirming the findings of the OLS results in Table 7.1. Also, the findings in relation to government ownership in Table 7.3 indicate that GOVNR is positively associated with Z-score and NPLs in Models 1 and 2, respectively. This is in line with the earlier findings reported in Table 7.1. The estimation results reported in Table 7.3 reveal that, FONR has positive association with all the BRT proxies except in Model 3 (LPROV) where the association is insignificant. Overall, these findings of the 2SLS approach offer further empirical support to the main results (OLS) reported in Table 7.1.

Finally, in terms of control effects, the coefficients of the bank specific control variables for the OLS and 2SLS models are similar. Precisely, FSIZ has negative influence on all the risk-taking proxies in the models except Model 3. Table 7.3 results show that LIQ has positive relationship with all the risk-taking proxies. These offer further support for the robustness of the evidence of the study.

Table 7.3: The association between various components of corporate governance variables and bank risk-taking with 2SLS with clustered errors

Variables	(1) Z-score		(2) NPLs		(3) LPROV		(4) CAR	
	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics
EXPERT	-0.009	3.172***	-0.0005	0.284	-0.007	1.646*	-0.004	0.277
	(0.003)		(0.002)		(0.025)		(0.016)	
NBMs	-0.246	1.695*	-0.044	0.392	-0.744	2.682***	-0.312	1.477
	(0.159)		(0.112)		(0.395)		(0.888)	
ISONR	-0.004	3.565***	-0.0032	3.504***	-0.001	0.163	-0.026	4.035***
	(0.001)		(0.001)		(0.010)		(0.006)	
GOVNR	0.002	1.841*	0.007	5.105***	0.015	0.838	0.008	0.783
	(0.002)		(0.001)		(0.017)		(0.011)	
FONR	0.004	3.549***	0.002	3.511***	0.002	0.157	0.026	4.027***
	(0.001)		(0.001)		(0.010)		(0.006)	
BSIZE	0.229	1.995**	0.112	1.641*	0.305	0.304	1.572	2.441**
	(0.115)		(0.081)		(0.005)		(0.644)	
BDIVG	-0.001	0.556	-0.0003	0.183	-0.018	0.767	-0.03	0.859
	(0.003)		(0.001)		(0.025)		(0.014)	
FSIZ	-0.059	3.641***	-0.003	2.172**	0.171	1.203	-0.021	2.384**
	(0.017)		(0.001)		(0.142)		(0.085)	
CAP	-0.008	0.417	-0.346	2.358**	-0.162	0.640	-0.162	0.640
	(0.208)		(0.147)		(0.815)		(0.815)	
LIQ	0.587	2.376**	0.137	3.653***	0.355	2.066**	0.355	1.610*
	(0.427)		(0.311)		(0.732)		(0.732)	
AGE	0.107	2.216**	0.007	2.076**	0.074	0.175	0.073	0.175
	(0.048)		(0.003)		(0.420)		(0.421)	
YDU	Yes		Yes		Yes		Yes	
CDU	Yes		Yes		Yes		Yes	
Obs	1820		1820		1820		1810	
Partial R-Sq	0.38		0.41		0.39		0.42	
F-sta	1407.5		1541.2		1532.4		1498.1	
Endogeneity	0.023		0.041		0.09		0.074	

*Notes: This table presents the 2SLS regression results on the impact of board and bank ownership structures on bank risk-taking proxies. Standard errors are clustered by country and time which are reported in parentheses. ***, ** and * indicate the coefficient is significant at 1%, 5% and 10% levels, respectively. The definitions of the variables used in the analysis are provided in Table 4.4. Variables are defined as follows: Individual financial directors who are financial experts (EXPERTS), number of board meetings (NBMs), institutional ownership (ISONR), government ownership (GOVNR), Foreign ownership (FONR), board size (BSIZE), board gender diversity (BGDIVG), firm size (FSIZ), capitalization (CAP), liquidity (LIQ) and age (AGE).*

Chapter 8

8 Conclusion and avenue for future research

This chapter provides conclusion and avenue for future research of the thesis. Specifically, section 8.1 offers conclusion to include a summary of the chapters and overview results of the chapters. In section 8.2, the policy implications of the study are provided, whilst the limitations of the study are discussed in section 8.3. Finally, suggestions for future research are provided in section 8.4.

8.1.1 Summary of the chapters

The governance reforms and regulatory changes in ESSA, starting with the 1994 South African CG code on improving the governance of banks, have served to make banks accountable. More importantly, much of the attention on the reforms has focused on the assumption that, internal CG mechanisms can limit excessive executive pay, enhance sustainable banking disclosures and performance of banks in the countries. Accordingly, present-day, banks in ESSA are confronted with increased pressure from the public and policy makers to adopt better governance practices. As the largest sector in the financial system and one of the largest economic sectors in ESSA, policy makers are progressively pushing for well-established internal governance principles like that found in developed economies (e.g., UK and US). Given the importance of the implementation of several banking reforms and significant regulatory changes regarding corporate governance, this study reveals a number of crucial implications on executive pay, sustainable banking disclosure, financial performance and risk-taking nature of banks in the ESSA banking system in the post reforms period.

8.1.2 Overview results of the chapters

In chapter 5, the study investigates whether broad corporate governance disclosure index (CGI) can determine compensation received by executives, and subsequently explores the possibility of CGI moderating the pay-for-sustainability sensitivity (PSS) for English-Speaking Sub-Saharan African banks. Specifically, the chapter examines the influence of CGI on executive directors pay (EPAY), non-executive directors pay (NPAY) and total pay for all directors (TPAY). Additionally, the chapter explores the relationship between executive compensation (EPAY, NPAY and TPAY) and sustainable banking disclosures (SBD). Furthermore, the chapter ascertains whether bank CGI has any moderating effect on the PSS in the ESSA banks.

The results of the chapter reveal that in relation to internal governance, the CGI effect on executive compensation (EPAY, NPAY and TPAY) and SBD in the ESSA region is crucial. This is an important finding, especially in the light of extensive internal governance reforms in the region. The main findings of chapter 5 are briefly summarized in Table 8.1 after testing the hypotheses. Consistent with the expectation of the chapter and the theoretical prediction, the results of the effect of CGI on EC (EPAY, NPAY and TPAY) are negative and significant in the whole sample and in better-governed banks. This evidence suggests that, internal level corporate governance disclosures limit excessive EC in ESSA banks This implies that as the banks disclose more internal governance information in their annual reports, the less likelihood that senior managers may have the opportunity to expropriate shareholders wealth. More importantly, this findings also offer empirical support for the expectation of the Combined CG code in the ESSA countries that seeks to limit excessive EC in the banking system.

However, analysis of the impact of CGI on EC (EPAY, NPAY and TPAY) reveal that in a banking environment where there are weak internal governance structures (poorly-governed banks), the link between CGI and EC are insignificant. This lends support for both optimal contrasting theory and managerial power hypothesis. Again, this evidence is consistent with the prediction of the Combined Code in the region that in poor governance environment, executives can influence the decision of the board and offer themselves with excessively generous compensation schemes.

Next, in line with the hypotheses of the chapter, the findings of the chapter show that executive directors pay (EPAY) positively influences SBD, thereby providing support for optimal contrasting theory and managerial power hypothesis. This evidence suggests that, the arrangement of executive directors pay in the ESSA banks can be designed in such a manner that it can potentially increase SBD, thereby offering support for the linking of EPAY with sustainability targets as specified by the Combined CG Code in ESSA region. But, on the contrary, non-executive (NPAY) and total executive pay (TPAY) have negative link with SBD. This evidence suggests that, the linking of NPAY and TPAY in the ESSA banks may not potentially influence progress in SBD initiatives in the ESSA region and thereby providing support for managerial power hypothesis.

In respect of the association between the various components of executive compensation variables (EPAY, NPAY and TPAY) and the individual dimensions of sustainable banking disclosure (ENV, SOC, HAS, EHR, CIV and EMP), the empirical investigations reveal similar

outcomes. Consistent with the expectation of the Combined CG Code in the region, the findings report that executive directors pay increases all the individual dimensions of SBD. Nevertheless, the link between EPAY and, ENV and HAS were found to be weak in ESSA banks. Alternatively, and despite the high expectations of the Combined CG Code, the results demonstrate that, NPAY has negative influence on three dimensions of SBD namely SOC, HAS and CIV. But there is no indication of a significant connection between NPAY and the other three components of SBD (ENV, EHR and EMP) in the ESSA banks. Despite major SBD reforms, the results of the individual analysis reaffirm that, TPAY exhibits an inverse link with SBD among the ESSA banks. Specifically, TPAY exhibits significant negative association with ENV, SOC, EHR, CIV and EMP; but the results establish no statistically significant link between TPAY and HAS in the ESSA banks.

The chapter also investigates the influence of CGI on the pay-for-sustainability sensitivity (PSS). The results of the analysis show that, CGI has a positive moderating effect on the PSS. Overall, the results suggest that CGI has impact on executive pay and sustainable banking in the ESSA region. In particular, the chapter reports that whilst the PSS increases in better-governed banks, it was found to decrease in poorly-governed banks in the region. Specifically, the analysis confirms that banks with stronger CG mechanisms tend to have substantially stronger PSS than poorly-governed banks. Notably, this findings provide support for both OCT and MPH. It also reaffirms the expectation of the Combined CG Code in the region that corporate governance structures are key determinants of executive directors pay and sustainable banking disclosures in the ESSA region.

Table 8.1: Summary findings of chapter 5

Variables name	Expected sign	Actual sign	Agrees with hypothesis	Applicable theory
Panel A: CGI and EC				
CGI and EPAY	-	(-)*	Yes	OCT and MPH
CGI and NPAY	-	(-)*	Yes	OCT and MPH
CGI and TPAY	-	(-)*	Yes	OCT and MPH
Better-governed banks				
CGI and EPAY	-	(-)*	Yes	OCT and MPH
CGI and NPAY	-	(-)*	Yes	OCT and MPH
CGI and TPAY	-	(-)*	Yes	OCT and MPH
Poorly-governed banks				
CGI and EPAY	-	-	Yes	OCT and MPH
CGI and NPAY	-	-	Yes	OCT and MPH
CGI and TPAY	-	-	Yes	OCT and MPH

Panel B: EC and SBD				
EPAY and SBD	+	(+)*	Yes	OCT and MPH
NPAY and SBD	-	(-)*	No	OCT and MPH
TPAY and SBD	-	(-)*	No	OCT and MPH
Panel C:CGI on EC-SBD				
EPAY*CGI and SBD	+	(+)*	Yes	OCT and MPH
NPAY*CGI and SBD	+	+	No	OCT and MPH
TPAY*CGI and SBD	+	-	No	OCT and MPH

Where * denote insignificant

In chapter 6 of the thesis, the study examines the relationship among corporate governance disclosure index (CGI), sustainable banking disclosures (SBD) and financial performance (FP), and consequently explores whether CGI can improve the sustainability-for-performance sensitivity (SPS) in the ESSA banks. More importantly, the chapter highlights that SBD and FP of banks in the region are driven by internal corporate governance structures in the region. The summary findings of chapter 6 are provided in Table 8.2. In line with the theoretical framework and the hypothesis of the chapter, the result of the effect of CGI on SBD is positive and significant, which supports the argument that SBD enhances the FP of banks.

More crucially, further analysis provides evidence suggesting that, banks with stronger CG structures have a tendency to engage in substantially higher SBD initiatives than banks with weak internal governance structures. This provides support for the integrated theoretical framework of both optimal contrasting theory and managerial power hypothesis. The study also deepens the analysis on the CGI-SBD by exploring the impact of CGI on the individual dimensions of SBD. The results show that CGI exhibits positive association with SOC, HAS, and EMP; but a negative but insignificant relationship with ENV and CIV dimensions of SBD.

Also, the study investigates the impact of SBD on the FP of banks in the region. Consistent with the hypothesis of the chapter, SBD has a positive and significant impact on ROA. However, the effect of SBD on ROE is positive, but is insignificant, suggesting a weak positive link between SBD and ROE. This is a crucial finding, especially in the light of major SBD reforms in the region that seek to promote SBD as a way of enhancing long term growth and sustainability of banks. Additionally, an investigation concerning the effect of the individual components of SBD on FP reveals that, SOC and EHR are positively related with ROA; but HAS and CIV have negative and significant effect on ROA. However, ENV and EMP have no significant influence on ROA. Again, the results reveal that SOC, EHR and EMP dimensions of SBD have positive link with ROE; but ENV, HAS and CIV have negative and significant

relationship with ROE. These findings reflect individual SBD dimensions impact on FP of banks in the ESSA region.

The study also shows that in relation to SBD-FP, internal governance structures effects are important. More specifically, the findings reveal that, CGI has a positive influence on the sustainability-for-performance sensitivity (SPS). The positive impact of CGI on the SPS increases significantly in better-governed banks than their poorly-governed counterpart. In general, the results in this chapter suggest that CGI is a key determinant of sustainable banking as it enhances the SPS in the ESSA banks.

Table 8.2: Summary findings of chapter 6

Variables name	Expected sign	Actual sign	Agrees with hypothesis	Applicable theory
Panel A: CGI and SBD				
CGI and SBD	+	(+)*	Yes	AT and RDT
Better-governed banks				
CGI and SBD	+	(+)*	Yes	AT and RDT
Poorly-governed banks				
CGI and SBD	+	(+)*	Yes	AT and RDT
Panel B: SBD and FP				
SBD and ROA	+	+	Yes	RBV, SHT and NIT
SBD and ROE	+	(+)*	No	RBV, SHT and NIT
Panel C:CGI on SPS				
SBD*CGI and ROA	+	(+)*	Yes	AT, RBV, RDT and SHT
SBD*CGI and ROE	+	(+)*	Yes	AT, RBV, RDT and SHT

Where * denote insignificant

In chapter 7, the thesis examines the relationship among board attributes, ownership and competition on risk-taking in ESSA banks. Table 8.3 provides key findings of chapter 7. Consistent with the expectation of the chapter and the theoretical prediction, the results show that independent directors who have financial expertise are important in the region. More specifically, the findings show that board independent financial experts have relatively strong voice in promoting safe banking by reducing bank risk-taking. The study also observes that the intensity of board monitoring activity as assessed by meetings organized by the board negatively influence the behaviour of risk-taking in the banking system. This evidence suggests increasing the number of times the board meets allows the board to provide strategic advice and effective oversight duty which can limit excessive risk-taking ESSA countries.

Next, the chapter examines the influence of ownership structures on BRT. The results suggest that government and foreign holdings encourage banks to engage in more BRT. The

findings also reveal that institutional owners in banks in the region have more incentives to monitor managers which reduces risk-taking. In particular, institutional shareholders in the ESSA region who are predominantly public pension fund have low risk-taking preferences. Thus, such influential institutional investors tend to impose their low risks preferences on managers which could potentially reduce bank risk-taking. Finally, the evidence of the study reveals that competition exacerbates the risk-taking behaviour of banks consistent with "competition-fragility" view.

Specifically, this study finds that competition assessed by Lerner index has positive influence on all the four bank risk-taking measures namely Z-score, non-performing loans (NPLs) and loan-loss provision and capital adequacy ratio. In a similar vein, the chapter finds that competition measured by H-statistics has positive impact on Z-score and non-performing loans; but has positive but insignificant relation with loan-loss provision and capital adequacy ratio. These findings confirm the prediction of "competition-fragility" view which argues that, as competition intensifies banks are more encouraged to engage in high risk-taking tendency. This is mainly as a result of an increase in lending avenues, thereby reducing profits and the eroding of the charter value of banks in the region.

Table 8.3: Summary findings of chapter 7

Variables name	Expected sign	Actual sign	Agrees with hypothesis	Applicable theory
Panel A: Board and BRT				
EXPERT and BRT	-	(-)*	Yes	AT, SHT and RDT
NBMs and BRT	-	(-)*	Yes	AT and SHT
Panel B: Ownership and BRT				
ISONR and BRT	-	(-)*	Yes	AT and SHT
GOVNR and BRT	+	(+)*	Yes	AT, SHT and RDT
FONR and BRT	+	(+)*	Yes	AT and RDT
Panel C: Competition and BRT	+	(+)*	Yes	Competition fragility view

Where * denote insignificant

In conclusion, the results present strong evidence that CG structures have substantial implications on the ESSA banks' executive pay, sustainable banking disclosures and bank risk-taking behaviour in the post governance reforms period in the region.

8. 2 The implications of the thesis

The evidence of the thesis has different policy implications for banking practitioners, policy-makers and regulators in the ESSA region.

8.2.1 Implication for banking practitioners

With respect to the banking system in the ESSA region, this thesis has important implications concerning how the banks are managed. Managerially, the results of the thesis help in understanding of responsible banking practices by uncovering new dynamics that affect sustainable banking practices and can assist corporate executives to strategically manage sustainable banking initiatives of their banks. For example, given the evidence of the positive moderating effect of corporate governance on the association between sustainable banking disclosures and financial performance of banks, this should serve as a strong motivation for banking practioners to adopt quality internal governance systems as a key tool to drive the financial performs of their banks.

Moreover, this thesis offers insight to corporate executives on the need to be transparent and communicate their bank's sustainable banking engagements to the society, investors and other stakeholders. Further, the implication of the result of the study confirms sustainable banking investments as a win-win business model and so banking practitioners are encouraged to integrate sustainable banking initiatives into their core operations, rather than considering it as a peripheral corporate activity. Also, based on the results of the study, the adoption of good corporate governance standards will also benefit banking practitioners in the region, as it can limit excessive bank risk-taking, thereby safeguarding the banking system from collapse and loss of jobs.

8.2.2 Implications for policy-makers

The results of this thesis have important implications for policy-makers in the ESSA region. First, sustainable banking disclosure score of the banks is generally low when compared with reported scores in other developing countries. Consequently, policy-makers such as the Security and Exchange Commission in the various countries should endeavour to provide explicit guidelines on sustainable banking reporting so as to improve sustainable banking disclosures in the region. For example, policy-makers should introduce detailed guidelines to ensure that sustainable banking disclosures are based on actual performance and not symbolic disclosures that are intended to deceive investors and the general public. It is also crucial for policy-makers to administer such sustainable banking disclosure standards as an obligatory policy in the ESSA banking system.

Second, the results of this thesis show that, for greater effectiveness and commitment to sustainable banking in the region, policy reforms concerning monitoring (CG) and incentive

alignment (EC) should be jointly pursued. For example, for maximum impact, it is recommended that the design of clear sustainable compensation-based executive compensation should constitute a considerable share of total executive pay in order to bring into line corporate managers interests with other stakeholders. More importantly, such reforms should be carried out with corresponding corporate governance reforms by policy-makers.

Again, the results of this thesis demonstrate that, it is imperative for policy-makers to enhance the role of internal governance structures in the regions' banking system. One probable way of doing so is to ensure that banks in ESSA comply with the requirements of corporate governance disclosures. In particular, the evidence of the study raises the need for policy-makers to put in place effective governance structures as such mechanisms are proved to limit bank risk-taking. For example, employing independent financial experts and encouraging more board meetings can help in reducing bank risk-taking behaviour. Therefore, policy-makers should ensure that, future corporate governance reforms establish criteria for the selection of independent directors who are financial experts to the board.

Finally, the small number of females on the board of banks in the ESSA region suggests that female appointment to the board may be done for symbolic reasons or as a form of token. This may limit the contribution of female directors to decision-making process in the boardroom. This seems to indicate that, board gender diversity may need to be improved substantially before it can be expected to influence bank risk-taking in the ESSA region. Accordingly, policy-makers may set a criteria for the inclusion of female directors into the board.

8.2.3 Implication for regulators

The findings of the thesis has policy implications for the regulation of the governance of banks in the ESSA region. First, the results on the effect of independent directors who are financial experts on bank-risk taking support the notion for recommending greater independent directors who are experts (in particular relating to financial expertise) as this can mitigate excessive bank risk taking behaviour in the region. Second, evidence relating to the impact of institutional ownership on bank risk-taking calls for regulators (especially Central Banks) to encourage individuals to invest through institutional investors. Third, the results of the association between government ownership and bank risk-taking should encourage regulators to promote less government investment in the banking sector by putting in place extensive restrictions on government ownership in the ESSA countries.

Fourth, the evidence on the impact of competition on bank risk-taking calls for regulators especially Central Banks to design and implement optimal financial liberalization policies such as mergers and acquisitions to curtail intense bank competition. In addition, regulators may encourage entry of foreign banks through mergers and acquisition as way of helping such foreign banks to overcome any liabilities of foreignness. Fifth, for regulators, the results of this thesis should motivate them to put more pressure on banks to adopt sustainable banking practices, particularly, on less responsible banks in the region. Finally, the evidence from the ESSA cross-country level may also be relevant to regulators and Central Banks in other regions and countries.

8. 3 Limitations of the thesis

Comparable to all archival research with similar notion, this thesis has some limitations that must be acknowledged. The first limitation of the study is that, the data is limited to ESSA banks and thus, the findings should be interpreted within this context. The study focused on banks in ESSA countries due to language barrier. Specifically, the study excluded banks in French-speaking countries in Sub-Saharan Africa (FSSA) because the annual reports of banks in FSSA are reported in French. In particular, the corporate governance and sustainable banking disclosures were manually extracted from the annual reports of the banks, which is a highly labour-intensive activity (Ntim, 2009). As a result, practical limitations of language barrier, time, effort and finance meant that the banks had to be from countries where the corporate governance disclosures and sustainable banking information in the annual reports of the banks are reported in English language.

More importantly, this criteria led to a sample that is substantially large enough to make a significant contribution, whilst at the same time guaranteeing that the thesis is done within the scheduled time-frame of a PhD research work. Besides, this is consistent with prior corporate governance studies (e.g., Sarpong-Kumankoma et al., 2019; Siueia et al., 2019) in the region that similarly excluded banks in FSSA countries from their final sample, which facilitated drawing comparisons with the findings of these studies. Nonetheless, together, the ESSA countries account for nearly 70% of the total GDP of the Sub-Saharan Africa.

The second limitation is that, the study employs corporate governance disclosure index and sustainable banking disclosure information provided by the banks. This is because corporate governance disclosure and sustainable banking information in ESSA banks are not available as in the developed market which are provided by international rating agencies. The third

limitation of the thesis is that, the study could not include all the banks in ESSA due to the availability of the required governance information. A larger set of banks in the region would have improved the generalization of the results. Nevertheless, it must be indicated that the accessibility of corporate governance variables for that kind of data may be scarce as this is the main motive that accounted for the adoption of the data size of this study. Fourth, it must also be acknowledged that another limitation of the study is that, some bank specific control variables (such as the loan portfolio size, deposits and capital adequacy) were not included in the models. Notwithstanding, the bank specific control variables employed in the study are consistent with prior banking studies that conducted similar investigations in the ESSA region.

The final limitation of the study is that, apart from country dummies, the study did not control for country differences with governance indicators (such as political instability, corruption and government effectiveness) and macroeconomic variables such as GDP, inflation and unemployment. Together, these weaknesses may potentially limit the generalisation of the thesis findings. The findings of this thesis should therefore be interpreted in the light of the above highlighted limitations. Thus, these limitations present avenues for future research. Therefore, the subsequent section discusses potential avenues for future research and improvements.

8.4 Suggestions for further studies

The study provides a fertile ground for further research and improvements in the field in the region as highlighted below. First, for deeper insights, the study encourages further studies to expand and explore other governance data (executive characteristics such as CEO education, age and culture, and external governance mechanisms) as such data become available in the ESSA region. Second, in terms of improvement in the pay-for-sustainability sensitivity investigation, the study encourages future research to investigate other financial performance variables such as market based indicators as and when data become available in the ESSA banking sector. Also, future studies can expand this study by adopting diverse research methodology. This may include qualitative and event study research designs. Importantly, such investigations will offer new insights. This might contribute to the understanding of the relationships among corporate governance, sustainable banking and financial performance of banks.

Third, the study examined direct and indirect relationships among the dependent and independent variables by using single regression models. Future research may explore these

relationships by employing structural equation modelling (SEM) which might help detect these relationships with multiple dependent variables which is not available with regression models that depend only one dependent variable at a time. Finally, the study did not include country differences with regards to governance indicators (such as political instability, corruption and government effectiveness) and macroeconomic variable such as GDP, unemployment rate and inflation. Future researchers may provide new insight by including these variables in their investigations.

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Appendices

Appendix 1: SBPs Disclosure Index

SBD category	SBD item: Information on or reference to	Range of scores	Total score per theme
(i) Social investment and Service quality	1.Provision of support to students by way of sponsorship for needy but brilliant students	0–4	
	2.Education policy.	0–4	
	3.Support for educational infrastructure such as building schools	0–4	
	4.Support for educational campaign and sensitization such as girl child education	0–4	
	5.Support for training of teachers	0–4	108
	6.Housing policy	0–4	
	7.Support for building of affordable houses and community centres among others	0–4	
	8.Power and energy policy to address issues related to electricity and power	0–4	
	9.Support for rural electrification projects	0–4	
	10.Investment in renewable energy (e.g. Solar energy, wind among others)	0–4	
	11.Investment in potable water projects such as boreholes	0–4	
	12.Investment in water treatment projects and water conservation	0–4	
	13.Road policy in place to address issues related to provision of road.	0–4	
	14.Investment in road construction, road construction equipment, street lights among others.	0–4	
	15.Provision of internship facilities for university students with or without cash allowance.	0–4	
	16.Sponsoring of local, national and international sports events (e.g., national soccer teams, U17, Olympics teams among others)	0–4	
	17.Donation to people affected by natural disaster (e.g. flood, earthquake)	0–4	
	18.Social empowerment programs (e.g., support for disabled people)	0–4	

	19.Donation to Rotary club, Lion's club, Red cross among others.	0–4	
	20.Policy on social products (e.g., educational loans and climate products)	0–4	
	21.Sponsorship of tournaments (e.g., golf, tennis, beach soccer, hockey).	0–4	
	22.Establishment of policy in relation to customer feedback	0–4	
	23. Strategies for future investments in social products and services	0–4	
	24.Organization of customer loyalty promotions	0–4	
	25.Customer appreciation (e.g., gifts and souvenirs to customers)	0–4	
	26.Donation of frail and difficult –to-reach customers	0–4	
	27. Cash donation or support for customers	0-4	
Total	**27 SBD items**		**108**

Appendix 1(continued)

APPENDIX

SBPs Disclosure Index

SBD category	SBD item: Information on or reference to	Range of scores	Total score per theme
(ii) Health and Safety	28. Implementation of detailed policy in relation to the issue of health and safety	0–4	
	29.Health education	0–4	
	30.Involvement in blood donation exercise	0–4	
	31.Adoption, implementation and or/enforcement of public health and safety measures (e.g., fire drills, call tree test amongst others)	0–4	
	32.Medical health screening for employees	0–4	
	33.Donation in support of costly surgery (e.g., heart, kidney transplant)	0–4	
	34.Policy on physical health and fitness of staff (e.g., participation in keep fit clubs among others)	0–4	
	35.Organization of health programs for staff (e.g., health talk, healthy living competitions, health walk amongst others).	0–4	

	36. Policy on mental health (e.g., counseling, stress level assessment)	0–4	
	37.Safety in the workplace	0–4	
	38.Product and customer safety	0–4	
	39.Cash donation to children's hospital to support operational expenses	0–4	
	40.Donation to purchase equipment to help the aged and children with hearing impairment	0–4	160
	41.Donation of vehicles to hospitals to support operation (e.g., ambulance, bus among others)	0–4	
	42.Contribution to national health fund (e.g., heart foundation fund, Sickle cell foundation amongst others).	0–4	
	43.Partnership with international medical charity organizations to perform surgical operations for children born with cleft lips and palates	0–4	
	44.Donation in support of children with autism disorder	0–4	
	45.Medical products (e.g., medical loan, maternal health support scheme)	0–4	
	46.Donation to the media (e.g., TV stations, Radio among others)	0–4	
	47.Contribution towards elimination of avoidable blindness	0–4	
	48.Financial support for staff in costly surgical operation	0–4	
	49.The overall bank's HIV/AIDS policy	0–4	
	50.Annual disclosure of total allocated budget to HIV/AIDS programs	0–4	
	51.The nature of healthcare provision for HIV/AIDS patients	0–4	
	52.Workplace-related HIV/AIDS programs and interventions	0–4	
	53.Monetary support for HIV/AIDS patients	0–4	
	54. Healthcare provisions available to employee family members	0-4	
Total	**54 SBD items**		**216**

Appendix 1 (continued)

SBPs Disclosure Index

SBD category	SBD item: Information on or reference to	Range of scores	Total score per theme

(ii) Safety and Health	55.Involvement and donation in support of malaria treatment and malaria eradication campaigns	0–2	
	56.Policy on malaria prevention	0–2	
	57.Policy on Ebola	0–4	
	58.Donation and budgetary support of local and national campaigns aimed at Ebola prevention.	0–4	
	59.Support for Ebola patients	0–4	
	60.Health screening and supply of free medication.	0–4	
	61.Donation of cash in support of costly medical equipment in different hospitals.	0–4	
	62.Participation in local and national breast cancer awareness campaign and donation for treatment of breast cancer patients	0–4	
	63. Donation to national and mutual health insurance shemes.	0–4	
	64.Support for cholera and hepatitis awareness campaigns	0–4	
	65.Support to accident victims	0–4	
	66.Offering health assistance to disabled and underprivileged children	0–4	
	67.Donation into hospitals in support of treating eye patients	0–4	
(iii) Ethics and Human Rights	68. Implementation of detailed policies and practices in relation to bribery and corruption.	0–4	
	69.Disclosure on cash donations in support of political parties and political activities.	0–4	48
	70.Policies and practices relating to handling of issues such as labour union, human rights amongst others.	0–4	
	71.Policy on working hours	0–4	
	72.Labour rights	0–4	
	73.Indigenous people relations	0–4	
	74.Fair business practice	0–4	
	75.Code of business ethics	0–4	
	76.Right to embark on strike	0–4	
	77.Right to form labour unions	0–4	
	78.Policy on gender and minorities	0–4	
	79.Whistle blowing policy	0–4	
(iv) Environment	80.Product innovation	0–4	

	81. Reduced environmental cost	0-4	
Total	**81 SBD items**		**324**

SBPs Disclosure Index

SBD category	SBD item: Information on or reference to	Range of scores	Total score per theme
(iv) Environment	82.Overall bank's policies and concerns with regards to environmental issues, standards and achievements	0–4	
	83.Implementation of comprehensive environmental management systems.	0–4	
	84.Energy saving strategies in place to address environmental issues	0–4	
	85.Detailed environmental projects aimed at protecting natural resources such as recycling and raw material conservation.	0–4	
	86.Any other activities relating to aesthetics, sustainability among others	0–4	
	87.Support for projects designed to protect the environment	0–4	
	88.Support in a form of cash for environmentally friendly projects (e.g checking of river erosion, pollution reduction).	0–4	
	89.Contribution to the fight against illegal mining by way of national campaigns or cash donations.	0–4	84
	90.Environmental reporting	0–4	
	91.Environmental certification	0–4	
	92.Support of recreational activities	0–4	
	93.Donation towards land reclamation and restoration	0–4	
	94.Recognition (e.g., recipient of local or international awards for CSR Projects or initiatives)	0–4	
	95.Implementation and promotion of environmental awareness through effective communication.	0–4	
	96.Support for skills acquisition and training on conservation of the environment.	0–4	
	97.A detailed policy on the banks 'support and strategies for the oil and gas industry.	0–4	

	98. Policy on climate change	0–4	
	99.Policy on greenhouse gas emission and global warming	0–4	
	100.Clean energy policy	0–4	
(v) Community involvement	101.Participation in tree planting exercise	0–4	
	102.Community service	0–4	
	103.Volunteer programs	0–4	
	104.Distribution of new and used cloths to the aged and less privileged	0–4	
	105.Donation to care and orphanage homes	0–4	
	106.Donation to security agencies (e.g., police, army amongst others)	0–4	
	107.Employment generation	0–4	
	108. Donation to prison inmate	0-4	
Total	**108 SBD items**		**432**

SBD category	SBD item: Information on or reference to	Range of scores	Total score per theme
(v) Community involvement	109.Donation of raw materials or cash to local communities affected by rainstorm	0–4	
	110.Providing sponsorship for arts and culture.	0–4	
	111.Donation in support of families of victims of terrorist attacks	0–4	
	112.Donation and support to religious bodies during festive occasions (e.g., Christmas, Easter, Ramadan).	0–4	
	113.Cash donation to NGOs charities	0–4	
	114.Financial assistance to refugees and people from neighboring countries	0–4	84
	115.Donation to ministries, department and district's relief fund for fire victims.	0–4	
	116.Financial assistance to chiefs in aid of special projects (e.g., celebration of festivals, funerals, anniversaries).	0–4	
	117. Assessment of the negative impact of bank's products and services	0–4	
	118.Involvement in community based campaigns	0–4	
	119.Engagement of National service personnel	0–4	
	120.Policy in support of Agriculture	0–4	
	121.Involvement in national or local clean up exercise.	0–4	

(vi) Employees			
	122.Implementation of policies regarding the issue of staff training and development.	0–4	
	123.Adoption and implementation of employee welfare needs within the bank.	0–4	
	124.Information about support for staff in areas such as day-care, maternity and paternity leave.	0–4	
	125.Staff engagement programs	0–4	56
	126.Number of employees	0–4	
	127.Career development programs	0–4	
	128.Employee benefits	0–4	
	129.Employee value added statements	0–4	
	130.Employee recruitment issues	0–4	
	131.Staff pension commitments and gratuity	0–4	
	132.Compensation plan for employees	0–4	
	133.Cost of employees safety measures	0–4	
	134.Employee classification by function	0–4	
	135. Facilities for employees children and/or dependents	0-4	
Total	**135 SBD items**		**540**

Scoring procedure

0: No disclosure.

1: General or rhetorical (including instances of ritualistic and repeated) statements: deemed to be purely symbolic with no evidence of actual actions/activities on the ground.

2: Narrative explanation of what has actually been done or implemented: deemed to be a message of commitment (beyond symbolic).

3: Information provided in (2) above supported by quantitative/monetary data: deemed to be substantive by providing evidence of the scale of activities or actions.

4: Information provided in (3) above supported by explicit assessments of performance (relative to last period) or events (even if they are "bad" news), and which allows comparison between companies using external reporting models/benchmarks/assurance: deemed to be comprehensive.

Source: Based on classification identified in the CG codes of the countries in the region, annual reports of the sampled banks, SDGs 2015 and GRI (2016).

Appendix 2: Corporate governance (CG) disclosure index

CG theme	CG provision: Information on or reference to	Range of scores	Total score per theme
(i). Director and board	1. In case the roles of chairperson and MD/ CEO are split is disclosed.	0–1	37
	2. Whether the chairperson of the board is an independent, non-executive director.	0–1	
	3. If majority of non-executive directors (NEDs) constitute the board of the bank.	0–1	
	4. Does the board meet at least four times in a year.	0–1	
	5. Does the bank disclose records of individual directors' meetings	0–1	
	6. Whether the responsibilities of the board of directors is disclosed.	0–1	
	7. Classification of board of directors into executive, NED, and independent.	0–1	
	8. Disclosure of the performance of the chairperson.	0–1	
	9. Disclosure of the effectiveness and performance of the CEO/MD.	0–1	
	10. Disclosure of the board's performance and effectiveness.	0–1	
	11. Disclosure of directors' biography, experience and responsibilities.	0–1	
	12. Disclosure of a narrative with regards to a policy on the issue of diversity of the board.	0–1	
	13. Disclosure of the position of a company secretary filled by a competent and suitable person.	0–1	
	14. Disclosure of the performance of the company's secretary	0–1	
	15. As to whether directors have access to free independent professional legal advice	0–1	
	16. Narrative relating to induction, training and Personal development of directors.	0–1	
	17. Whether the size of the board in terms of number is disclosed.	0–1	
	18. Disclosure of the performance of individual board members.	0–1	
	19. Narrative on board charter, leadership duties and roles.	0–1	
	20. Disclosure of policy on staggered appointment and rotation of directors.	0–1	
	21. Disclosure of policy on multiple and alternate directorship of board members.	0–1	
	22. Disclosure on board independence, skills, experience and knowledge of the bank	0–1	

(continued on next page)

CG theme	CG provision: Information on or reference to	Range of scores	Total score per theme
(i). Director and board	23. If the bank has established remuneration committee.	0–1	43
	24. If the remuneration committee is made up of inly independent NEDs	0–1	
	25. If the chairperson of the remuneration committee is an independent NED.	0–1	
	26. Disclosure of the remit of the remuneration committee.	0–1	

	27. Disclosure of the performance of the remuneration committee.	0–1
	28. Disclosure of the membership of the remuneration committee.	0–1
	29. If the remuneration committee meets at least four times in a year.	0–1
	30. Disclosure of the establishment of nomination committee.	0–1
	31. If the nomination committee is made up of majority of independent NEDs is disclosed.	0–1
	32. As to whether the remit of the nomination committee as well as the evaluation and	0–1
	and assessment of the performance of committee is disclosed.	0–1
	33. As to whether the nomination committee chairperson is an independent board member is disclosed.	0–1
	34. As to whether the membership of the nomination committee of the board is disclosed.	0–1
	35. Disclosure meeting attendance records of members of the nomination committee.	0–1
	36. As to whether nomination committee meets at least four times in a year is disclosed.	0–1
	37. Disclosure relating to the issue of technological failure and breakdown.	0–1
	38. Whether share ownership by directors and officers is less than 50% of the total bank shareholdings.	0–1
	39. Whether the performance of all board sub committees' performance and effectiveness is evaluated is disclosed.	0–1
	40. Whether there is a board statement on the going-concern status of the bank is disclosed.	0–1
	41. Whether directors who hold directorships in other companies is disclosed.	0–1
	42. Whether directors made statements regarding internal controls is disclosed.	0–1
	43. Whether a narrative s relating to directors review of internal controls privately with auditors	0–1

(continued on next page)

CG theme	CG provision: Information on or reference to	Range of scores	Total score per theme
(ii). Accounting, auditing and transparency	44. Disclosure of the performance and evaluation of the audit committee	0–1	22
	45. As to whether an audit committee has been established.	0–1	
	46. As to if the audit committee is made up of at least three independent NEDs	0–1	
	47. As to whether the chairperson of the audit committee is an independent NED	0–1	
	48. Disclosure of the remit of the audit committee	0–1	
	49. Disclosure of the membership of the audit committee.	0–1	
	50. Disclosure of the audit committee members meeting attendance record.	0–1	
	51. At least one member of the audit committee has relevant financial training and experience	0–1	
	52. Disclosure of the performance of the individual members of the audit committee	0–1	
	53. Disclosure of director's remuneration, interests, and share options.	0–1	
	54. Disclosure of directors' philosophy and	0–1	

	procedure.		
	55. Disclosure of a policy on timely and balanced information concerning the bank.	0–1	
	56. Disclosure of evaluation the effectiveness of the risk management and governance of internal control and audit system.	0–1	
	57. Disclosure of a policy on risk management and governance strategy.	0–1	
	58. As to whether the audit committee meets at least four times in a year.	0–1	
	59. Disclosure of related party transactions or offers such as subsidiaries.	0–1	
	60.Policy to inhibits insider share trade before announcement of price sensitive information.	0–1	
	61. Existence of policies for appointing and disengaging external auditors.	0–1	
	62. Disclosure of annual financial performance of the bank.	0–1	
	63. Disclosure of policy on staggered appointment and rotation of directors.	0–1	
	64. Disclosure relating to the review of corporate operations.	0–1	
	65. Whether a narration relating to audit committees 'ability to investigate any issue under its terms of reference, the resources, and full access to information is disclosed.	0–1	

(continued on next page)

CG theme	CG provision: Information on or reference to	Range of scores	Total score per theme
(iii). Risk management, Internal audit and control	66. As to if a risk management committee has been established.	0–1	13
	67. Disclosure of the remit of the risk committee.	0–1	
	68. As to whether there is a disclosure of risk committee members' meeting attendance.	0–1	
	69. Disclosure of the membership of the risk committee.	0–1	
	70. As to whether risk management committee meets at least four times a year.	0–1	
	71. Disclosure of future systematic and non-systematic risk.	0–1	
	72. Disclosure of an existing internal systems (e.g., internal audit).	0–1	
	73. Disclosure of how current and future evaluated bank risk will be managed.	0–1	
	74. Disclosure on issues relating to IT governance.	0–1	
	75. Disclosure on issues with regards to Management, governance	0–1	
	76. Disclosure relating to risk management, governance strategy and policy.	0–1	
	77. Disclosure on issues with regards to management and governance, internal control and audit systems.	0–1	
	78. If the risk management committee membership is made up of executives, non-executives and independent directors	0–1	
(iv) Compliance, Shareholder rights and enforcement	79. Disclosure of the existence of one-share-one vote.	0–1	
	80. Disclosure of on how the bank encourages shareholder activism (proxy vote)	0–1	
	81.Positive statements with regards to compliance with national CG code	0–1	

	82. Disclosure on shareholder right to attend and also vote at annual general meetings.	0–1	
	83. Disclosure of how the bank is contributing to the development of financial journalism.	0–1	
	84. Disclosure of shareholders 'right to have their views on pay.	0–1	
	85. Disclosure of the issue of general compliance.	0–1	
	86. Disclosure of the existence of right of shareholders to call extraordinary meetings	0–1	
	87. Disclosure of right of shareholders to have timely information regards to AGM	0–1	

(continued on next page)

CG theme	CG provision: Information on or reference to	Range of scores	Total score per theme
(iv). Compliance shareholder rights and enforcement	88. Disclosure of shareholders right to receive annual report, other relevant communications.	0–1	15
	89. shareholders 'right to receive dividends and residual income out of liquidation.	0–1	
	90. Disclosure of a narrative with respect to equal treatment of all shareholders.	0–1	
	91. Disclosure of the use of modern ways of communication (e.g. Email, website, skype).	0–1	
	92. Disclosure of a narrative with regards to shareholders' right to transfer and registration of share ownership.	0–1	
	93. Disclosure of provisions of corporate governance.	0–1	
	94. Whether a narrative that indicates that the the board is accountable to shareholders is disclosed.	0-1	
	95. Whether governance committee is established is disclosed.	0-1	
	96. Whether there is a narrative that states that all shareholders have equal access information about the bank is disclosed.	0-1	
	97. Whether there is a narrative indicating that voting responsibility increases with size of shareholding is disclosed.	0-1	
	98. Whether there is disclosure of policy to ensure no block persons have unfettered power	0-1	
	99. Whether a narrative relating to effective communication among shareholders and other stakeholders is disclosed.	0-1	
	100. Whether a narrative relating to a policy on how the bank should relate with internal and external stakeholders	0-1	